Question bank 2 for USMLE Step III

Clinical Encounter Frame

20%-30% Initial care
50%-60% Continued care
15%-25% Emergency care

Physician Task
8%-12% Obtaining history and performing physical examination
8%-12% Using laboratory and diagnostic studies
8%-12% Formulating most likely diagnosis
8%-12% Evaluating severity of patient's problems
8%-12% Applying scientific concepts and mechanisms of disease
45%-55% Managing the patient
health maintenance
clinical intervention
clinical therapeutics
legal and ethical issues

You see a 23-year-old gravida 1 para 0 for her prenatal checkup at 38 weeks gestation. She complains of severe headaches and epigastric pain. She has had an uneventful pregnancy to date and had a normal prenatal examination 2 weeks ago. Her blood pressure is 140/100 mm Hg. A urinalysis shows 2+ protein; she has gained 5 pounds in the last week, and has 2+ pitting edema of her legs.

The most appropriate treatment at this point would be
a. strict bed rest at home and reexamination within 48 hours
b. admitting the patient to the hospital for bed rest and frequent monitoring of blood pressure,

weight, and proteinuria
c. admitting the patient to the hospital for bed rest and monitoring, and beginning hydralazine (Apresoline) to maintain blood pressure below 140/90 mm Hg
d. admitting the patient to the hospital, treating with parenteral magnesium sulfate, and planning immediate delivery either vaginally or by cesarean section

D

This patient manifests a rapid onset of preeclampsia at term. The symptoms of epigastric pain and headache categorize her preeclampsia as severe. These symptoms indicate that the process is well advanced and that convulsions are imminent. Treatment should focus on rapid control of symptoms and delivery of the infant.
Ref: Cunningham FG, MacDonald PC, Gant NF, et al: Williams Obstetrics, ed 20. Appleton & Lange, 1997, pp 713-717.

neonatal infections

Thrush
Oral candidiasis; peaks at 14 days of life.
Clinically. White plaques on erythematous base over oral mucosa, tongue.
Treatment. Nystatin suspension 100,000 to 200,000 U PO QID for 7 days. Mycostatin cream to maternal areola and nipple if breast-fed infant.

Neonatal Bacterial Sepsis
General comments. Neonatal bacterial sepsis is associated with 10% to 40% mortality and

significant morbidity, especially neurologic sequelae of meningitis. Infants <1 month old are immunologically deficient and are predisposed to serious infections.

Predisposing factors. Premature rupture of membranes (>24 hours), premature labor, maternal fever, UTI, foul lochia, chorioamnionitis, IV catheters (in infant), intrapartum asphyxia, and intrauterine monitoring (pressure catheter or scalp electrode).

Organisms.

Early infection (0 to 4 days of age). Group B streptococci and Escherichia coli 60% to 70% of infections. Also Listeria (rare in United States), Klebsiella, Enterococcus, Staphylococcus aureus (uncommon), Streptococcus pneumoniae, group A streptococci.

Late infection (>5 days of age). Staph. aureus, group B streptococci, E. coli, Klebsiella, Pseudomonas, Serratia, Staph. epidermidis, Haemophilus influenzae.

Signs and symptoms. Presentation may be subtle; thus any febrile neonate must have a septic work-up. Fever may be absent; so watch for symptoms below.

The presentation may include irritability, vomiting, poor feeding, poor temperature control, lethargy, apneic spells.

May progress to respiratory distress, poor perfusion, abdominal distension, jaundice, bleeding, petechiae, or seizures.

Bulging fontanel is a very late sign of neonatal meningitis, and Brudzinski's sign or Kernig's sign is rarely found.

Work-up.

Include LP for cell count, protein, glucose, and culture.

UA, CBC (remember neutropenia or thrombocytopenia are also suggestive of infection) and repeat in 5 hours, CXR and C-reactive protein.

Cultures of blood, urine, and any other site as indicated. Latex agglutination test for pneumococcus, E. coli, H. influenzae, group B streptococci, and meningococcus in blood, urine, and CSF is done even though the usefulness is questionable. Negative latex agglutination tests do not rule out infection, but positive results may help guide therapy.

Associated lab findings. Hypocalcemia, hypoglycemia, hyponatremia, and DIC.

Treatment.

Should be tailored to age of onset, clinical setting, and initial findings.

There should be NO DELAY in antibiotic therapy. Begin empiric therapy after cultures are obtained or before cultures if any delay is anticipated.
Empiric early (0 to 4 days old). Ampicillin 50 mg/kg/day (100 mg/kg/day in meningitis) divided 12 hours IV and gentamicin 5 mg/kg/day divided 12 hours IV.
Empiric late (>5 days old). Depends on cause (for example, methicillin-resistant Staph. aureus outbreak requires vancomycin) ampicillin 100 to 200 mg/kg/day divided Q8h plus (ceftriaxone 100 mg/kg/day IV Q12h or cefotaxime 150 mg/kg/day IV Q8h), or ampicillin-gentamicin as above usually adequate.
Repeat cultures in 24 to 48 hours. In meningitis, repeat LP every day until clear.
There are isolates of Streptococcus pneumoniae that are resistant to penicillin and cephalosporins. Depending on your institution, vancomycin plus rifampin should be added to the above regimens until sensitivities are known.
Other. Hemodynamic, respiratory, hematologic, metabolic, and nutritional support and surveillance are critical. Shock may require volume expansion (FFP preferred) or respiratory depression may require supplemental oxygen or artificial ventilation

In a pregnant patient with chronic hypertension and no underlying renal disease, the best indicator of superimposed preeclampsia is
a. proteinuria (300 mg/24 hr)
b. hyperuricemia
c. exacerbation of hypertension, as evidenced by a 10-mm Hg increase in diastolic blood pressure
d. edema

D

In the absence of renal disease, the onset of proteinuria (at least 300 mg/24 hr) is the best indicator of superimposed preeclampsia in a patient with chronic hypertension.

Which one of the following is true of a pregnant patient who has diabetes mellitus?
a. Adjustments in hypoglycemic medications are best made by following urine glucose readings
b. Oral hypoglycemic agents are useful during pregnancy in patients with mild diabetes mellitus
c. A precise knowledge of fetal age is important to a successful outcome for the fetus
d. Because the fetal pancreas helps control the diabetes, ketoacidosis is less likely during pregnancy

C

Ideally, the child of an overtly diabetic woman should be delivered close to term. Precise knowledge of fetal age (by menstrual history, accurate measurements of uterine height during the second trimester, and confirmation by sonography) is very important to a successful outcome for the fetus. In diabetic women the likelihood of severe metabolic acidosis is increased appreciably. Oral hypoglycemics should not be used during pregnancy. Pregnant diabetic women should be maintained in glucose homeostasis as close as possible to that of nondiabetic pregnant females. Home serum glucose monitoring has become the standard practice and is replacing urine glucose monitoring.

Severe growth retardation is diagnosed in the fetus of a 19-year-old unmarried white female at 36 weeks gestation. The diagnosis is based on biparietal diameter and there is scant amniotic fluid.

Which one of the following is the most appropriate management?
a. Perform serial L/S ratios until greater than 3.0, followed by prompt delivery
b. Induce labor, with careful fetal monitoring
c. Perform an immediate cesarean section
d. Follow the mother weekly with serial ultrasounds
e. Follow the mother weekly with nonstress tests

B

Appropriate management of the preterm infant who is severely growth retarded depends on several factors. Generally those near term should be delivered promptly. By the time that growth retardation has become severe, the fetus is usually mature enough to survive if delivered promptly. However, the fetus must be monitored carefully during labor, with facilities for immediate cesarean section if there is deterioration, and the neonate must receive excellent neonatal care beginning immediately after delivery.

Ultrasonography reveals placenta previa in a 41-year-old asymptomatic gravida 4 para 3 at 21 weeks gestation. Appropriate management would be

a. weekly speculum examinations under aseptic conditions beginning in her third trimester to assess the risk of bleeding

b. an MRI scan, with a repeat scan later in the pregnancy if indicated

c. repeat ultrasonography in her third trimester

d. cesarean delivery at 28 weeks gestation if her L/S ratio is favorable

e. reassurance that ultrasound diagnosis of placenta previa without evidence of bleeding is no cause for concern and can be disregarded

C

The incidence of placenta previa ranges from 6% to 45% in the second trimester, but more than 95% of these resolve by the third trimester. However, it remains a cause for concern and should be watched, not ignored, even if there is no bleeding. This patient should have repeat ultrasonography in her third trimester. An MRI is very helpful but need not be used except in a difficult diagnostic situation. Weekly speculum examinations would create a risk of hemorrhage. Delivery at 28 weeks would not be appropriate in a patient with no symptoms and without confirmation of the persistence of placenta previa.

A 27-year-old nondiabetic multiparous woman at 39 weeks gestation has had a previously uncomplicated pregnancy. Fundal height and estimates of fetal size have been at the upper limits of normal for several weeks. Today the fundus measures 44 cm from the pubis and you estimate

on palpation that the fetus is large. Clinical pelvimetry is normal.

Which one of the following treatment plans is supported by objective clinical evidence?

a. Perform external podalic version to breech position and deliver vaginally, in order to decrease the likelihood of shoulder dystocia

b. Place the mother on a 500-calorie/day diet in order to slow fetal weight gain

c. Perform a cesarean section based on the clinical estimate of above-normal fetal size

d. Order ultrasonography and perform a cesarean section if estimated fetal weight is 4000 g

e. Plan vaginal delivery, with personnel in the delivery room who are trained to assist with a difficult shoulder delivery should it occur

E

No study has demonstrated improvement in fetal outcome with cesarean delivery for estimated fetal weight above 4800 g, either estimated by fundal measurement and palpation or by ultrasonography, except in the case of diabetic women. Statistical estimates show greater increased morbidity and mortality for the mother than any achievable decrease in fetal morbidity and mortality. Therefore, vaginal delivery should generally be planned with delivery room personnel present to assist, should shoulder dystocia occur. An extremely low-calorie diet would be contraindicated and dangerous to both mother and fetus. External podalic version would be contraindicated and place the fetus at risk of a dangerous breech delivery.

Following a prolonged labor and traumatic delivery, a 5015 gram (11 lb 1 oz) white male infant holds his right arm in an abducted and internally rotated position with extension at the elbow, pronation of the forearm, and flexion of the wrist. Although the grasp reflex is intact, the biceps and brachioradialis reflexes are absent.

The most likely diagnosis is a

a. rotator cuff tear

b. clavicle fracture

c. brachial plexus injury

d. cerebral injury

e. fractured humerus

C

The clinical picture in this infant is typical of brachial plexus injury. Most cases of brachial plexus injury follow a prolonged and difficult labor culminating in a traumatic delivery. Duchenne-Erb (upper arm) paralysis, resulting from injury of the fifth and sixth cervical roots, is by far the most common manifestation of this disorder. The infant with upper arm paralysis holds the affected arm in a characteristic position, reflecting involvement of the shoulder abductors and external rotators, forearm flexors and supinators, and wrist extensors. In addition, the Moro, biceps, and brachioradialis reflexes are absent. Roentgenographic studies of the shoulder should be made to exclude tearing of the joint capsule, fracture of the clavicle, and fracture, dislocation, or upper epiphyseal detachment of the humerus. Cerebral injury is usually evidenced by other signs of central nervous system damage. Typically, rotator cuff tears are not associated with neurologic findings.

Which one of the following is an absolute contraindication to tocolytic treatment for preterm labor?

a. Urinary tract infection

b. Documented gestation less than 28 weeks

c. Chorioamnionitis

d. Uncontrolled diabetes mellitus

e. Any vaginal bleeding due to mild abruptio placentae

C

Before tocolytic treatment is instituted, absolute contraindications to tocolysis must be ruled out. These include chorioamnionitis, severe abruptio placentae, severe bleeding from any cause, severe pregnancy-induced hypertension, fetal death, fetal anomaly incompatible with life, and severe fetal growth retardation. Chorioamnionitis may precipitate preterm labor and is an

absolute contraindication to tocolysis. It may be present in a febrile pregnant patient even with intact membranes. In this case amniocentesis may be required to rule out infection. There are also a number of relative contraindications. These include uncontrolled diabetes, hyperthyroidism, maternal cardiac disease, mild chronic hypertension, mild abruptio placentae, stable placenta previa, fetal distress, fetal anomaly, mild fetal growth retardation, and cervical dilatation greater than 5 cm. In patients with relative contraindications to tocolysis the risk of complications from prematurity must be weighed against the risk of tocolysis. Not all vaginal bleeding is due to a serious obstetric condition. Cervical effacement or dilatation may be the cause. Even if the source of bleeding is determined to be a placental abruption, if the bleeding is minor, the abruption is mild, and the fetus is not in distress, tocolysis is not absolutely contraindicated.
While diabetes mellitus may be adversely affected by beta-adrenergic tocolytic agents, it is not an absolute contraindication to tocolysis. Close glycemic monitoring is, of course, mandatory. Even a few weeks of effective tocolysis may significantly alter the perinatal outcome of gestations between 25 and 27 weeks. Gestational age less than 28 weeks is therefore not a contraindication to tocolysis. While a urinary tract infection may precipitate preterm labor, tocolysis is not contraindicated. The infection, of course, should be treated.

A middlaged man with chest discomfort on exercise.
Diagnosis: stable angina.
How would you manage this patient.
Please add your input to the following list:
ECG
stress test
nitrates
aspirin
calcium-channel blockers.

1st line lab- CBC, Chem7, Lipid profile, UA,FOBT
Counsell- smoking cessation(if any), reduce alcohol intake, exercise, refer to dietecian for formulation of diet etc.

Aspirin PO

Metoprolol PO

Nitroglycerin SL prn(prn choice not available)

Take 1 tab SL q5min- if pain not relieved, immediately attend ER

F/U after 7 days.

Evaluation of patients with angina.

ECG. During an episode of pain, the ECG may show ST-segment depression, T-wave inversions, or it may be normal. The absence of ECG changes during an episode of angina does not rule out cardiac ischemia because the circumflex and posterolateral distributions can be electrically silent. Increasing use is being made of echocardiography and thallium studies (see below) to evaluate patients with continuing symptoms in the absence of ECG changes. Coronary artery disease is suggested if there is evidence of an old MI.

Graded exercise stress test or treadmill (GXT). The predictive value of a positive test depends on the prevalence of disease in the population being tested. Specificity is high in particular groups of symptomatic individuals but is generally <50% in asymptomatic individuals. Compared with men, women (especially young women) have higher rates of false-positive GXT. An early positive GXT may be indicative of left main disease or three-vessel disease. Absolute contraindications to GXT include CHF, acute MI, active myocarditis, unstable angina, recent embolism, dissecting aneurysm, acute illness, thrombophlebitis, and moderate to severe aortic stenosis. Relative contraindications include severe hypertension, mild to moderate aortic stenosis, hypertrophic obstructive cardiomyopathy, frequent ectopy, and many other conditions that may increase the risk of a GXT.

Thallium dipyridamole scan, or thallium GXT. Thallium dipyridamole scans can be useful for patients who cannot tolerate the physical demands of the GXT (because of arthritis, COPD). During the test, thallium is taken up by viable, well-perfused myocardium. Areas of myocardial infarction are indicated by fixed perfusion defects with no uptake during rest or exercise. During the thallium-GXT, areas that are hypoperfused (that is, ischemic) demonstrate thallium uptake only during the postexercise "resting" images. Adenosine, dipyridamole, and dobutamine may be used to augment the perfusion of normal myocardium and shunt blood flow away from areas of relative ischemia. These agents are used in patients who have a contraindication to exercise or are

unlikely to attain target heart rates.

Echocardiography. The stress echocardiogram is a widely performed test used to assess patients for coronary disease. Baseline echocardiographic images are obtained at rest. These are used to evaluate left ventricular function, wall motion, and valve function. Images are then acquired during peak stress (that is, during a GXT or with dobutamine) and compared with those at rest. Regional wall-motion abnormalities with stress indicate areas of hypoperfusion or ischemia. Echocardiography is now used routinely to assess CAD in women because of their high false-positive rate on GXT. It is also gaining increased usage among patients with an abnormal baseline ECG (that is, LBBB), those receiving digoxin, and after CABG or PTCA. Transesophageal echocardiography is more sensitive at identifying abnormalities such as valvular vegetations or atrial and ventricular thrombi.

Coronary angiography. Used to identify foci of coronary disease. It is the evaluation of choice in patients with angina that is (1) poorly responsive to medication, or (2) unstable. It is also indicated in patients with test results consistent with a high risk for CAD.

Treatment of Angina

Medical. May use two- or three-drug combination to maximize benefit while minimizing side effects.

Aspirin. Daily aspirin (325 mg) unless contraindicated to inhibit platelet aggregation.

Beta-blockers (metoprolol, atenolol, nadolol, propranolol, and others). Decrease myocardial oxygen demand by decreasing heart rate, systolic blood pressure, and contractility. Because they prolong diastole, beta-blockers also increase O2 supply by increasing myocardial perfusion time. Some beta-blockers (those without intrinsic sympathomimetic activity [ISA] activity, especially lipophilic ones [see below]) prolong life when given for the first year after an MI. This benefit extends into subsequent years in those with a complicated course. Lipophilic beta-blockers (timolol, metoprolol, and propranolol) decrease the incidence of postinfarction ventricular fibrillation and sudden death in both men and women by increasing the electrical stability of myocardium. They are also useful in patients whose angina is regularly provoked by exercise though they may limit exercise tolerance. Start with a low dose and increase until symptoms are

controlled or the resting heart rate is 50 to 60 beats/min. Side effects can include bradycardia, bronchospasm, fatigue, GI upset, symptoms of LV failure, and orthostatic hypotension. Impotence, depression, and Raynaud's phenomenon can occur. Do not discontinue beta-blockers abruptly, since rebound tachycardia can occur.

Calcium-channel blockers (verapamil, diltiazem, nifedipine, and others). These drugs act by blocking the influx of calcium through slow channels into vascular smooth muscle and myocardial cells. They promote peripheral arterial vasodilatation, which decreases oxygen demand by decreasing afterload. Calcium-channel blockers also decrease coronary vasospasm and improve collateral flow. Diastolic relaxation of the LV is enhanced, and coronary perfusion is increased with those agents that slow heart rate. Verapamil and diltiazem decrease conduction through the AV node and can be useful to abolish SVT or to slow the ventricular response in atrial fibrillation and atrial flutter. Heart block or asystole can develop in patients with AV node or sinus node disease. First-generation calcium-channel blockers have negative inotropic effects, which can lead to CHF in patients with impaired LV function. Other common side effects of calcium-channel blockers include headache, ankle swelling, GI upset, and constipation. Diltiazem and verapamil are relatively contraindicated after MI in those with CHF and should be avoided. Recent information suggests that nifedipine may increase mortality in some patients (probably as a result of reflex tachycardia).

Nitrates (nitropaste, nitropatches, isosorbide dinitrate, others). Effects include venous and arteriolar vasodilatation, which decreases oxygen demand. The resulting coronary artery vasodilatation increases coronary oxygen supply. Tolerance can develop but can be overcome by providing an 8-hour nitrate-free interval each day. Preparations include oral, transdermal patches, ointment, sublingual tablets, or spray. A common side effect is headache, which usually responds to aspirin or acetaminophen and tends to improve with continued use. Sublingual nitroglycerin tablets (0.4 mg PRN) or spray are used for acute episodes of angina and may be repeated at 5-minute intervals for up to 3 doses. Patients should be instructed to go to the emergency department if angina is not relieved after 3 doses of nitroglycerin.

ACE inhibitors, though not traditionally indicated for angina, may be useful in the patient whose symptoms are difficult to control. ACE inhibitors reduce afterload and directly dilate coronary arteries.

Revascularization.

Coronary artery bypass grafting (CABG). Primary indication is angina refractory to medical therapy or lesions that are more amenable to surgery than to angioplasty. CABG has been shown to prolong survival in patients with left main disease (>50% luminal narrowing) and in three-vessel CAD with LV dysfunction (ejection fraction >50%). Surgery may prolong survival in three-vessel disease with normal LV function and in two-vessel disease with significant proximal stenosis of LAD (if not anatomically suited for PTCA).

Contraindications. Advanced age with pronounced debility, absence of ischemia, or ungraftable coronary arteries. Advanced age in and of itself is not a contraindication. In one sample of patients 80 years and older, coronary revascularization by either CABG or PTCA (see below) was associated with a high likelihood of attaining a good or excellent quality of life and of a patient being able to care for himself or herself subsequent to an MI.

PTCA (percutaneous transluminal coronary angioplasty). Can be useful for significant (<50% luminal narrowing) single-vessel CAD when lesions are amenable to the procedure. PTCA does not prevent MI or prolong life. Randomized clinical trails comparing medical therapy with PTCA in single-vessel disease have not shown any significant advantage to using PTCA. Several controlled clinical trials have shown that PTCA can be used as an alternative to CABG in two- and three-vessel CAD when lesions are amenable to PTCA. There was general agreement among these trials that the procedures provide equal improvement in angina. The PTCA groups generally have a higher frequency of antianginal use after 1 year and are more likely to require additional intervention (CABG or repeat PTCA) compared to patients who undergo CABG. PTCA is an acceptable alternative to repeat CABG if lesions are amenable to dilatation (single-vessel stenosis, or easily accessible two-vessel stenoses). Diabetics have a particularly poor long-term result with PTCA. Intracoronary stenting may be preferred in these patients.

Intracoronary stenting. Controlled clinical trials have demonstrated that intracoronary stenting reduces restenosis rates after PTCA from a range of 40% to 50% to a range of 15% to 25%. Recently developed stent deployment techniques using high-pressure balloon inflation and combinations of aspirin and ticlodipine have reduced the abrupt closure rate for stents to <1% and reduced hospital stays to 1 or 2 days.

a pateint presented to the ER c/o sever headache following head trauma in a motor vehicle accident. he is also confused and mini mental exam confirmed that. His rt foot is showing some bruising and his ankle is swollen. His BP is 144/90 and his pulse is 78 and regular. you ordered cbc and chem 7 and the Na came back 117meq/l. suddenely he started developing siezures and biting his tongue. you immediately inserted an airway. **What would you do next to correct his hypo Na?**

A. NORMAL SALINE

B. 0.45 Na Cl

c. Glucose 5%

d. Hypertonic saline

e. Ringer lactate

D

Acute hyponatremia is less common than chronic hyponatremia and typically is seen in patients with a history of sudden free water loading (eg, patients with psychogenic polydipsia, infants fed tap water for 1-2 days, patients given hypotonic fluids in the postoperative period).
Acute evolution of hyponatremia leaves little opportunity for compensatory extrusion of CNS intracellular solutes.

The ultimate danger for these patients is brainstem herniation when sodium levels fall below 120 mEq/L.

The therapeutic goal is to increase serum sodium rapidly by 4-6 mEq/L over the first 1-2 hours.

First, the source of free water must be identified and eliminated.

In patients with healthy renal function and mild to moderately severe symptoms, serum sodium may correct spontaneously without further intervention.

Patients with seizures, severe confusion, coma, or signs of brainstem herniation should receive hypertonic (3%) saline to rapidly correct serum sodium toward normal, but only enough to arrest the progression of symptoms.

An increase in serum sodium of 4-6 mEq/L is generally sufficient.

A 28-year-old gravida 2 para 1 presents to the emergency department at 16 weeks gestation. She has noted the sudden onset of dyspnea, pleuritic chest pain, and mild hemoptysis. Both calves are mildly edematous and somewhat tender. A lung scan shows a high probability of pulmonary emboli.

Which one of the following would be appropriate management at this time?

a. Warfarin therapy only, with the prothrombin time maintained at 18 to 20 seconds (INR 2.0 to 3.0)

b. Aspirin, 81 mg/day throughout the pregnancy

c. Intravenous heparin for 5 to 10 days followed by warfarin anticoagulation

d. Intravenous heparin for 5 to 10 days followed by subcutaneous heparin for the duration of the pregnancy

e. Placement of an inferior venous umbrella filter

D

The risk of pulmonary embolism is five times higher in a pregnant woman than in a nonpregnant woman of similar age, and venous thromboembolism is a leading cause of illness and death during pregnancy. There has been a considerable change in management over the past two decades.

Because heparin does not cross the placenta, it is considered the safest anticoagulant to use during pregnancy. Initially, patients with venous thromboembolism during pregnancy should be

managed with heparin given according to the recommendations for nonpregnant patients. Warfarin should not be used throughout pregnancy. It is definitely teratogenic during the first trimester and extensive fetal abnormalities have been associated with exposure to warfarin in any trimester. Warfarin readily crosses the placenta and can result in a host of problems.
Women with venous thromboembolism during pregnancy should receive intravenous heparin for 5 to 10 days followed by subcutaneous heparin for the duration of the pregnancy. Warfarin therapy can be given after pregnancy, since it is not present in breast milk.
The indications for placement of inferior vena cava filters in pregnant patients are the same as in nonpregnant patients-any contraindication to anticoagulant therapy, heparin-induced thrombocytopenia, and recurrence of pulmonary embolism in patients receiving adequate anticoagulant therapy.
There are no data to support the use of treatment or prophylaxis of pulmonary embolism either during or after pregnancy.

A 24-year-old white primigravida has developed several 1- to 2-mm erythematous papules on her abdomen in the third trimester. They are pruritic and tend to appear in her striae. Liver function tests and a CBC are normal.

Which one of the following is the most likely diagnosis?

a. Pruritus gravidarum
b. Spangler's papular dermatitis
c. Impetigo herpetiformis
d. Herpes gestationis
e. Pruritic urticarial papules and plaques (PUPP)

E

The findings in this patient are most consistent with PUPP. This condition is usually benign, is not associated with increased fetal morbidity, and resolves after delivery, and there is usually no recurrence in subsequent pregnancies. Herpes gestationis, impetigo herpetiformis, and Spangler's

papular dermatitis have different presentations and may be associated with increased fetal morbidity. Pruritus gravidarum is characterized by pruritus without skin lesions.

My approach:

Intravenous access, Oxygen, morphine, nitroglycerin SL, if pain persists after 3 SL, assume MI and start IV nitroglycerin, and titrate dose upwards until pain relieved). Monitor vital signs (how often, not sure).

ECG (how often), chem7, CBC, UA, Chest X ray, lipid profile
Troponin T, I, CK-MB
Stress test to risk stratify

If stable, follow earlier discussion on stable angina
If unstable, then admit the patient, prepare for coronary angiography, and consider ballon angiography with or w/o a stent in the same session.

tPA
metoprolol, IV (if no contraindications)
aspirin
low molecular heparin, IV
IIb/IIIa blockers: abciximab or tirofoban, or eptifibatide

treat any arrythmias and other complications

Admit if: new angina
accelerating angina
admit to a monitored bed.

If angiography single vessel: PTCA, triple or left main (esp. w/ LV dysfunction): CABG, double and some triple, either PTCA or CABG, if no major stenosis, medical therapy, but be wary of acute coronary syndrome still, consider stress test, if inconclusive still, consider additional stress echocardiogram, or stress myocardial perfusion scintigram. If none of these positive (inclucding ECG), investigate other organ systems.

Long term management:

Aggressive and extensive risk factor modification
Continue LMW heparin if recurrent and high risk for MI in whom revascularization not possible.
Beta-blockers: metaprolol
quit smoking,
lipid lowering therapy
ACE inhibitors

Please try to develop a better algorithm and change any sequence if you think anything I did was not in the right order.

An 85-year-old white male nursing-home resident has a 18 days history of anorexia, malaise, and intermittent fever to 38.5° C (101.3° F). The fever has persisted despite empiric therapy with amoxicillin, followed by ciprofloxacin (Cipro). Her present weight is 49.5 kg , compared to 54.5 kg 3 weeks ago. Her mental status, characterized by a dementia pattern consistent with Alzheimer's disease, has not changed. A physical examination discloses no significant abnormalities. A CBC, urinalysis, erythrocyte sedimentation rate, and chest radiograph are also unremarkable.

Which one of the following is most likely to help make the diagnosis?

1.PPD skin testing
2.Colonoscopy
3.CT scan of the head

4.Serologic testing for syphilis

5.Liver biopsy

1

1) a biochemistry prof, with fatigue and Normal H&P, CVS,RS,Abdo, GEnital, REctal,HEENT normal, normal vitals....only thing was Calcium of 11....now, he had all normal lelvels of all possible calcium related endocrine parameters?
   what the hell did he have?

   2)40 yr , lady, with cough, dry in nature. previuosly treated for 3 days with Erythromycin...comes again with same cough..and CXR shows mild hilar lnpathy with some reticular shadowing. WBC-8000, with 60 neutro, 30 lympho, 4 eosin, 6 macro....
   Incidentally patient has vaginal yeast infection too...
   Any correlation between two

BRAIN DEATH CRITERIA -important for exam

Know the criteria for brain death in adults especially to know that a patient who is hypothermic or intoxicated cannot be certified dead until these are reversed.

Explanation: This consists of 3 components.

I. Cessation of all function of the entire brain- this critereon is mandatory

II.Irreversibility- this too is mandatory

III.Confirmatory investigations (this may be optional or required, depending on local practice)

I. Cessation of all function of the entire brain -mandatory-consisting of ALL the following because even if one of them is present- patient is not brain dead.

A. Unresponsive coma

B. Absent brainstem reflexes

1. Pupillary light reflex

2. Corneal reflex

3. Cephalic (caloric) reflexes

4. Oropharyngeal (gag) reflex

5. Respiration (apnea testing)

II. Irreversibility-mandatory

A. Coma of known cause without potential for reversibility

B. Exclusion of contributory, reversible conditions

1. Drug intoxication

2. Neuromuscular blockade

3. Hypothermia (<32.2 C, 90 F)

4. Shock

5. Major metabolic disturbance

C. Persistence for an appropriate period of observation (6-24 hours,

depending on the cause of coma and local practice)

III. Confirmatory investigations (may be optional or required, depending on local practice)

A. Electrocerebral silence (isoelectric EEG)

B. Absence of circulation to the brain

Recognize the indications of CABG (coronary artery bypass surgery)

Explanation:

The population that nearly always benefits from CABG does not include everyone with CAD.

The subgroups that benefit are 3 groups of patients-

1) those with triple vessel disease AND LV dysfunction,

2) those with left main disease ,

3) lastly those with Diabetes mellitus as per the BARI trial.

Anyone not falling into these categories is not a great candidate for surgery

Know the workup of a solitary pulmonary nodule

Explanation:

A solitary pulmonary nodule consists of a solid nodule 1-6 cm in diameter that is surrounded by normal aerated lung tissue.

Once this picture is found, one works it up according to the probability of it being malignant.

Some clinical features and some radiological features are useful pointers.

The best is to compare it with another X-ray of the chest that is more than 2 years old (if available). If no change has occurred, it is most likely benign.

Features that point towards a malignant potential are:

Age > 35 yrs
Smoker

Weight loss
Spiculated edges of lesion
<20 % of lesion calcified
In all the above 5 scenarios, a histologic diagnosis is important. if none of the above exist then one should re X-ray it in 6 months

If the lesion is in the medial 2/3 of the lung fields then a bronchoscopic biopsy is best. If in the peripheral 1/3 then a CT guided biopsy is appropriate.

Once a malignancy is established then one has to work - up a non small cell carcinoma. A small cell Ca is considered non-operable and is treated with chemotherapy.

ANTHRAX-a question may come from area

Anthrax - a guide for doctors and patients
Introduction:
Anthrax is a bacterial disease. It is caused by a bacteria that belongs to the same family as E. coli. called Enterobacteraciae. It is not a virus. Unfortunately, it has become a recent threat as it can be used for biological warfare.

The bacteria:
It is a rod shaped bacteria with rounded edges. It cannot be seen by the naked eye. Labs need a microscope to see it.

When doctors check or screen for bacteria, they stain the specimens commonly with a simple technique called gram staining. There are very few bacteria that are rod shaped and test positive on this test. Fortunately - for diagnostic purposes, anthrax bacteria test positive. This immediately raises a flag.

Modes of spread:
It is spread by its spores that can survive harsh natural conditions for years.

It may be transmitted by infected or contaminated animals and animal products, insect bites, inhalation or ingestion.

Spread of anthrax usually does not take place from person to person except where the patient has skin lesions. It could however take place by handling contaminated articles.

In the Florida cases, it seemed to be transmitted by exposure from spores that were sitting on the computer keyboard (I am looking at my own keyboard as I type this).

I do not want people to panic because Florida is currently one of the most prepared states in the United States to tackle this problem. In my own office, we have at least a hundred doses of medicines that tackle anthrax. I am sure other doctors are prepared too.

Types of disease:
It is seen in three main forms.

Skin (cutaneous), intestinal (gastrointestinal), and its most dangerous form - lung infection or pneumonia (pulmonary).

Cutaneous anthrax is the most common manifestation of infection with B. anthracis. Inhalation (pulmonary) anthrax occurs in persons working in certain occupations where spores may be forced into the air from contaminated animal products, such as animal hair processing. Occupational risk groups include those coming into contact with livestock or products from livestock, e.g., veterinarians, animal handlers, abattoir workers, and laboratorians.

A patient with this form of anthrax may present with a blister with central denting and surrounding swelling that cannot be indented.

This is full of the antrax bacteria, making it highly infective as it sheds a lot of bacteria.

The intestinal form shows up as diarrhea and fever. Fortunately the commonest family of drugs used to treat this type of illness even in the non-anthrax condition treats anthrax as well.

The lung form of the disease begins abruptly with high fever and chest pain. It quickly turns into a bleeding type of illness and is frequently fatal. These cases are not highly infective.

If untreated, anthrax in all forms can lead to the bacteria entering the bloodstream and quickly - death. Early treatment of cutaneous (skin) anthrax is usually curative, and early treatment of all forms is important for recovery. 25% to 75%. of patients with gastrointestinal (intestinal) anthrax will die. Almost 90 - 100% of those with lung anthrax will die.

Preventing disease and its spread:
Anthrax in the veterinary world commonly affects herbivorous animals. Human immunity against anthrax is higher than the herbivores. This does not mean that vegetarians are any less immune to the bacteria than non-vegetarians.

We must identify what common things that come in contact with many hands in a day's time and be cautious about their safety. I am going to list a few here.

Currency notes and coins, Paper files and inter office mail envelopes, Card swiping areas, e.g. time card machines and credit card machines, Support bars into a bus, Door knobs, Water fountains, Gas station vending handles, Vending machines, Public telephones, Perfume testers in a mall, Coins and tokens for a slot machine, Buttons at traffic signals used by pedestrians to get access, Library computers, books and video tapes, Rented video tapes, etc, Objects in churches that many people touch, etc.

Please wash your hands before you touch your mouth or nose after you touch something that may

be contaminated. Avoid opening letters if you have a wound on your hands.

Treatment:
Early treatment is vital. Therefore you do not need to hoard a full course of the antibiotics that are effective but just the first dose alone.

Many good antibiotics are available that are approximately equally useful but Once symptoms of the lung form appear, fatality is high inspite of treatment.

Levaquin, Cipro, Tequin, avelox are good medicines that could be used.

Penicillin too is useful as are many other antibiotics.

Most commonly, the skin form comes along and one can treat that very effectively.

What should your doctor do?
Having been a licensed practitioner for over 10 years, practice of reasonable and economical medicine has now become second nature to me. I am not trying to say that what is outlined here is perfect but these guidelines will certainly help those who have not put in a lot of thought into this. If other doctors also put in thought into this, they will come out with similar answers.

If a patient wants to keep antibiotics at home for him and his family, he should only be offered dosing for 24 hours.

This means 2 tablets of Ciprofloxacin (Cipro) or 1 tablet of Levaquin or Avelox or Tequin. He should be told that this should be given if suspicion is high and the patient should be examined by a doctor soon.

Giving out long courses are going to create a shortage and thus further panic in the community.

If the doctor has a suspicion of anthrax in the patient, he should immediately draw and keep blood from the patient and then administer the first dose of the antibiotic immediately.

If it is a skin lesion that the doctor sees, he should take a scraping from the skin lesion and send part of it for a Gram stain and another part for culture. Antibiotic of course should be given immediately.

Doctors also should try to avoid use of these antibiotics in conditions where other antibiotics are equally effective.

What does it mean that the cases are due to genetically un-altered bacterial strains?

Since the cases had the above type of strain, it is unlikely that these are from terrorists. It is more likely that someone who has animals got that strain and now has mailed the stuff to different people across the country. One should look through veterinary records and match up people who owned animals that died of anthrax in the Tampa-bay area. I could certainly be wrong but I rarely am.

How concerned should we be about the future:
Not very. I am not an astrologer nor a psychic but seeing that these cases have been from unaltered bacteria, I feel that these are not well prepared terrorists left around. Had this attack come from well prepared terrorists, we would have seen very communicable, genetically altered anthrax strains. They would have used their biowarfare material already within this one month. Regardless, almost all doctor's offices are well prepared with antibiotics.

Vaccine:
In the civilian world, the health departments are most likely going to be the first to recieve vaccine supplies. I think that many of us doctors should volunteer and offer to give out the vaccines if that is decided by the government. Our clinic has already registered with the health department for this purpose.

A 7-year-old white female is brought to your office because of a 3-day history of an increasingly clumsy gait. The mother noted that she first observed the problem 2 days earlier when her daughter climbed out of the bathtub and had difficulty standing up while being dried off. At the time she thought the child was just playing. The next day the child seemed better and went to school, but was sent home because she was having difficulty on the playground and said that "it was hard" going up the stairs. The child had a minor upper respiratory illness, as did other family members, but otherwise was not particularly sick. However, on the morning of this office visit, the child was unable to stand up when she got out of bed and had difficulty using her spoon to eat her cereal. She had no difficulty swallowing.

Examination is within normal limits, except for a slightly runny nose which drains clear, watery mucus. There is no evidence of ear infection or sinusitis. She has profound weakness (but not total paralysis) of the lower extremities, and to a lesser extent, the upper extremities. There is no sensory deficit and no difficulty with urination.

never having had any similar symptoms. The family lives in a rural area near woods; she has two older brothers. Family pets include two dogs, a cat, and a parakeet. No family members or animals are sick. Blood counts, chemistries, urinalysis, cerebrospinal fluid, a CT scan of the head, and a chest roentgenogram are all normal. A tick is found in her scalp.

Which one of the following statements is true concerning this patient's condition?

a. The most likely diagnosis is tick paralysis; the tick should be removed and the patient followed
b. Since the patient had progressive symptoms for 3 to 4 days, removing the tick at this point will probably not lead to total recovery
c. Tick paralysis is fatal to the majority of patients
d. The paralysis is caused by a toxin produced by Babesia microti
e. Treatment includes physical therapy and broad-spectrum antibiotics

A

With all laboratory tests being normal, finding a tick on this patient strongly suggests that the diagnosis is indeed tick paralysis. Untreated, tick paralysis can have a 10% to 12% mortality rate. The paralysis is thought to be caused by a neurotoxin produced by the tick's salivary glands, and not an infection. Recovery is usually prompt when the tick is removed, and neither physical therapy nor broad-spectrum antibiotics would be necessary to hasten recovery. Babesia microti causes babesiosis, and paralysis is not part of its symptom complex.

Which one of the following statements is most accurate concerning juvenile rheumatoid arthritis?

a. Fever is a rare systemic manifestation

b. Ten years after the onset of disease, most patients have excellent functional status

c. Most patients have a permanent deformity of at least 1 extremity

d. The disease is characterized by lifelong recurrences

e. Most patients require corticosteroid treatment

B

At least 50% of patients followed for up to 15 years have complete remission of juvenile rheumatoid arthritis, and 70% regain normal function. A few patients are left with crippling joint deformities, but 75% have no significant residual deformity. Systemic-onset disease is accompanied by high fever, rheumatoid rash, polyarthritis, and other systemic manifestations.

You see a 2-week-old Hispanic female in your office because of a rash in the diaper area. The rash is intensely red, has sharp borders with satellite pustules and papules beyond the borders, and involves the inguinal folds.

The most likely cause of the rash is

a. primary irritant dermatitis

b. atopic dermatitis

c. psoriasis

d. seborrheic dermatitis

e. candidal infection

E

The rash described is typical of a candidal infection, one of the most common causes of diaper rash. The rash of seborrheic dermatitis starts in the skin folds and extends to convex surfaces, with a poor demarcation from surrounding skin. It is characterized by yellow, greasy scales, and may involve other sites such as the scalp, face, and retroauricular areas. When psoriasis begins in infancy it usually starts in the area of greatest trauma, which is the diaper area. The typical well-demarcated plaques may not appear scaly because of moisture and maceration.
Atopic dermatitis usually begins after 2 months of age and is characterized by marked pruritus and secondary bacterial infections with oozing and crusting. Primary irritant dermatitis usually begins after 3 months of age and appears on convex surfaces with sparing of the folds. The involved skin is erythematous and has a shiny appearance. It is caused by trapped moisture and friction at sites of contact with the diaper.

A 4-year-old white female is brought to your office by her parents because she swallowed a penny 1 hour ago. Examination of the pharynx is normal. A radiograph reveals a coin in the area of the gastric antrum.

Which one of the following would be most appropriate?

a. Immediate consultation with an otolaryngologist

b. Immediate consultation with a gastroenterologist

c. An abdominal radiograph in 12 hours

d. An abdominal radiograph in 24 hours

e. Advising the parents to monitor stools for passage of the coin and to report any abdominal symptoms

E

Many children are exposed to unnecessary radiation and surgery after swallowing coins. It is recommended that all affected children have a single initial film of the chest and neck. Unless they have symptoms, patients with coins below the cardia should require no follow-up other than reassurance.

You see a white male who is concerned because he is the shortest boy in his class. His age is 14.3 years and his parents are of normal height. He has a negative past medical history and no symptoms. On physical examination you note that he is 151 cm (59½ in) tall. The average height for his age is 165 cm. His weight is 43 kg (95 lb). His sexual maturity rating is 3 for genitalia and 2 for pubic hair. A wrist radiograph shows a bone age of 12.2 years (the average height is 152 cm for this age).

On the basis of this evaluation you can tell the boy and his parents that

a. he should have a growth hormone stimulation test

b. his adult height will be below average

c. his sexual development is about average for his age

d. he will begin to grow taller within a year or so

e. an underlying nutritional deficiency may be the cause of his short stature

D

Constitutional growth delay, usually genetic in origin, consists of delayed, but eventually normal, growth in adolescents. If evaluation of the short adolescent boy reveals no evidence of chronic disease, if his sexual maturity rating is 2 or 3, and if his height is appropriate for skeletal age, he can be told without endocrinologic testing that he will begin to grow taller within a year or so. Adult height may be below average, but cannot be predicted reliably. Average sexual maturity ratings for a boy of 14.3 years are 4 for genitalia and 3 to 4 for pubic hair. The history and physical examination would have given clues to any illnesses or nutritional problems.

You examine a full-term infant who weighs 2800 g (6 lb 3 oz). His Apgar scores are 8 and 9, and your initial evaluation reveals no abnormalities. The mother is not your patient and you note from her chart that she had no prenatal care. Approximately 12 hours after delivery you are notified that the mother is positive for human immunodeficiency virus (HIV).

Which one of the following is the appropriate management of the newborn?

a. Begin zidovudine (AZT, Retrovir) prophylaxis immediately

b. Begin zidovudine prophylaxis only if the infant's HIV status is positive

c. Encourage breastfeeding to promote maternal antibody transfer

d. Provide routine newborn care

A

HIV transmission from mother to newborn may occur during pregnancy, labor, or delivery, or postnatally via breastfeeding. The mother-to-infant transmission rate is approximately 20% to 30%. Zidovudine prophylaxis beginning during pregnancy and continuing postnatally for the first 6 weeks of the infant's life has been shown to reduce the transmission rate. Although the most significant benefit occurs if prophylaxis is begun during pregnancy, there is still some potential benefit if it is started within 24 hours after birth.

gulf war syndrome

Persian Gulf Syndrome

1999

Wallace, H. L., 2nd, B. Natelson, W. Gause, and J. Hay. 1999. Human herpesviruses in chronic fatigue syndrome. Clin Diagn Lab Immunol. 6(2):216-23.

We have conducted a double-blind study to assess the possible involvement of the human herpesviruses (HHVs) HHV6, HHV7, Epstein-Barr virus (EBV), and cytomegalovirus in chronic fatigue syndrome (CFS) patients compared to age-, race-, and gender-matched controls. The CFS patient population was composed of rigorously screened civilian and Persian Gulf War veterans

meeting the Centers for Disease Control and Prevention's CFS case definition criteria. Healthy control civilian and veteran populations had no evidence of CFS or any other exclusionary medical or psychiatric condition. Patient peripheral blood mononuclear cells were analyzed by PCR for the presence of these HHVs. Using two- tailed Fisher's exact test analyses, we were unable to ascertain any statistically significant differences between the CFS patient and control populations in terms of the detection of one or more of these viruses. This observation was upheld when the CFS populations were further stratified with regard to the presence or absence of major axis I psychopathology and patient self-reported gradual versus acute onset of disease. In tandem, we performed serological analyses of serum anti- EBV and anti-HHV6 antibody titers and found no significant differences between the CFS and control patients.

Unwin, C., N. Blatchley, W. Coker, S. Ferry, M. Hotopf, L. Hull, K. Ismail, I. Palmer, A. David, and S. Wessely. 1999. Health of UK servicemen who served in Persian Gulf War. Lancet. 353(9148):169-78.

BACKGROUND: Various symptoms in military personnel in the Persian Gulf War 1990-91 have caused international speculation and concern. We investigated UK servicemen. METHODS: We did a cross-sectional postal survey on a random sample of Gulf War veterans (Gulf War cohort, n=4248) and, stratified for age and rank, servicemen deployed to the Bosnia conflict (Bosnia cohort, n=4250) and those serving during the Gulf War but not deployed there (Era cohort, n=4246). We asked about deployment, exposures, symptoms, and illnesses. We analysed men only. Our outcome measures were physical health, functional capacity (SF-36), the general health questionnaire, the Centers for Disease Control and Prevention (CDC) multisymptom criteria for Gulf War illness, and post- traumatic stress reactions. FINDINGS: There were 8195 (65.1%) valid responses. The Gulf War cohort reported symptoms and disorders significantly more frequently than those in the Bosnia and Era cohorts, which were similar. Perception of physical health and ability were significantly worse in the Gulf War cohort than in the other cohorts, even after adjustment for confounders. Gulf War veterans were more likely than the Bosnia cohort to have substantial fatigue (odds ratio 2.2 [95% CI 1.9-2.6]), symptoms of post-traumatic stress (2.6 [1.9- 3.4]), and psychological distress (1.6 [1.4-1.8]), and were nearly twice as likely to reach the

CDC case definition (2.5 [2.2-2.8]). In the Gulf War, Bosnia, and Era cohorts, respectively, 61.9%, 36.8%, and 36.4% met the CDC criteria, which fell to 25.3%, 11.8%, and 12.2% for severe symptoms. Potentially harmful exposures were reported most frequently by the Gulf War cohort. All exposures showed associations with all of the outcome measures in the three cohorts. Exposures specific to the Gulf were associated with all outcomes. Vaccination against biological warfare and multiple routine vaccinations were associated with the CDC multisymptom syndrome in the Gulf War cohort. INTERPRETATION: Service in the Gulf War was associated with various health problems over and above those associated with deployment to an unfamiliar hostile environment. Since associations of ill health with adverse events and exposures were found in all cohorts, however, they may not be unique and causally implicated in Gulf-War-related illness. A specific mechanism may link vaccination against biological warfare agents and later ill health, but the risks of illness must be considered against the protection of servicemen.

Straus, S. E. 1999. Bridging the gulf in war syndromes [comment]. Lancet. 353(9148):162-3.
Murphy, F. M. 1999. Gulf war syndrome [editorial; comment]. Bmj. 318(7179):274-5.
Das, A. K., L. D. Davanzo, G. J. Poiani, P. G. Zazzali, A. T. Scardella, M. L. Warnock, and N. H. Edelman. 1999. Variable extrathoracic airflow obstruction and chronic laryngotracheitis in Gulf War veterans. Chest. 115(1):97-101.

STUDY OBJECTIVES: To study the flow-volume loop for evidence of variable extrathoracic airflow obstruction in Persian Gulf War veterans. DESIGN: Retrospective case-control, single-center study. SETTING: The pulmonary division of an academic health-care center. SUBJECTS: A convenience sample of the Persian Gulf Registry. MEASUREMENTS AND INTERVENTIONS: (1) Midvital capacity ratio (ratio of maximum forced midexpiratory to maximum forced midinspiratory flow). This ratio is the criterion standard for the diagnosis of variable extrathoracic airflow obstruction. (2) Evaluation of the anatomy and function of the extrathoracic airway by fiberoptic bronchoscopy. (3) Further investigation into the airway abnormality by histologic evaluation of tracheal biopsy samples in Gulf War veterans only. RESULTS: Midvital capacity was > 1.0 in 32 of 37 Gulf War veterans compared with only 11 of

38 control subjects. The mean (+/-SD) value was 1.37+/-0.4 among Gulf War veterans and 0.88+/-0.3 among control subjects (p=0.0000005). FVC and its ratio to FEV1 were normal in all these subjects. Bronchoscopy showed inflamed larynx and trachea in all (n=17) Gulf War veterans. Histologic study showed chronic inflammation of the trachea in everyone (n=12) who had an adequate biopsy sample. CONCLUSION: Physicians should be made aware of the presence of chronic inflammation of the upper airways and inspiratory airflow limitation in a number of Gulf War veterans.

Zhang, Q., X. D. Zhou, T. Denny, J. E. Ottenweller, G. Lange, J. J. LaManca, M. H. Lavietes, C. Pollet, W. C. Gause, and B. H. Natelson. 1999. Changes in immune parameters seen in Gulf War veterans but not in civilians with chronic fatigue syndrome. Clin Diagn Lab Immunol. 6(1):6-13.

The purpose of this study was to evaluate immune function through the assessment of lymphocyte subpopulations (total T cells, major histocompatibility complex [MHC] I- and II-restricted T cells, B cells, NK cells, MHC II-restricted T-cell-derived naive and memory cells, and several MHC I-restricted T-cell activation markers) and the measurement of cytokine gene expression (interleukin 2 [IL-2], IL-4, IL-6, IL-10, IL-12, gamma interferon [IFN-gamma], and tumor necrosis factor alpha [TNF-alpha]) from peripheral blood lymphocytes. Subjects included two groups of patients meeting published case definitions for chronic fatigue syndrome (CFS)-a group of veterans who developed their illness following their return home from participating in the Gulf War and a group of nonveterans who developed the illness sporadically. Case control comparison groups were comprised of healthy Gulf War veterans and nonveterans, respectively. We found no significant difference for any of the immune variables in the nonveteran population. In contrast, veterans with CFS had significantly more total T cells and MHC II+ T cells and a significantly higher percentage of these lymphocyte subpopulations, as well as a significantly lower percentage of NK cells, than the respective controls. In addition, veterans with CFS had significantly higher levels of IL-2, IL-10, IFN-gamma, and TNF-alpha than the controls. These data do not support the hypothesis of immune dysfunction in the genesis of CFS for sporadic

cases of CFS but do suggest that service in the Persian Gulf is associated with an altered immune status in veterans who returned with severe fatiguing illness.

Coker, W. J., B. M. Bhatt, N. F. Blatchley, and J. T. Graham. 1999. Clinical findings for the first 1000 Gulf war veterans in the Ministry of Defence's medical assessment programme . Bmj. 318(7179):290-4.

OBJECTIVE: To review the clinical findings in the first 1000 veterans seen in the Ministry of Defence's Gulf war medical assessment programme to examine whether there was a particular illness related to service in the Gulf. DESIGN: Case series of 1000 veterans who presented to the programme between 11 October 1993 and 24 February 1997. SUBJECTS: Gulf war veterans. MAIN OUTCOME MEASURES: Diagnosis of veterans' conditions according to ICD-10 (international classification of diseases, 10th revision). Cases referred for psychiatric assessment were reviewed for available diagnostic information from consultant psychiatrists. RESULTS: 588 (59%) veterans had more than one diagnosed condition, 387 (39%) had at least one condition for which no firm somatic or psychological diagnosis could be given, and in 90 (9%) veterans no other main diagnosis was made. Conditions characterised by fatigue were found in 239 (24%) of patients. At least 190 (19%) patients had a psychiatric condition, which in over half was due to post-traumatic stress disorder. Musculoskeletal disorders and respiratory conditions were also found to be relatively common (in 182 (18%) and 155 (16%) patients respectively). CONCLUSION: Many Gulf war veterans had a wide variety of symptoms. This initial review shows no evidence of a single illness, psychological or physical, to explain the pattern of symptoms seen in veterans in the assessment programme. As the veterans assessed by the programme were all self selected, the prevalence of illness in Gulf war veterans cannot be determined from this study. Furthermore, it is not known whether the veterans in this study were representative of sick veterans as a group.

1998

Rook, G. A., and A. Zumla. 1998. Is the Gulf War syndrome an immunologically mediated phenomenon? [editorial]. Hosp Med. 59(1):10-1.

Pollet, C., B. H. Natelson, G. Lange, L. Tiersky, J. DeLuca, T. Policastro, P. Desai, J. E. Ottenweller, L. Korn, N. Fiedler, and H. Kipen. 1998. Medical evaluation of Persian Gulf veterans with fatigue and/or chemical sensitivity. J Med. 29(3-4):101-13.

The purpose of this study was to determine if Gulf War veterans with complaints of severe fatigue and/or chemical sensitivity (n = 72) fulfill case definitions for chronic fatigue syndrome (CFS) and/or multiple chemical sensitivity (MCS) and to compare the characteristics of those veterans who received a diagnosis of CFS (n = 24) to a group of non-veterans diagnosed with CFS (n = 95). Thirty-three veterans received a diagnosis of CFS with 14 having MCS concurrently; an additional six had MCS but did not fulfill a case definition for CFS. The group of fatigued veterans receiving a diagnosis of CFS was comprised of significantly fewer women and fewer Caucasians than the civilian group, and significantly fewer veterans reported a sudden onset to their illness. Veterans with CFS had a milder form of the illness than their civilian counterparts based on medical examiner assessment of the severity of the symptoms, reported days of reduced activity, and ability to work. Since CFS in veterans seems less severe than that seen in civilians, the prognosis for recovery of veterans with this disorder may be better.

Lashof, J. C., and J. S. Cassells. 1998. Illness among Gulf War veterans: risk factors, realities, and future research [editorial; comment]. Jama. 280(11):1010-1.

Landrigan, P. J., J. C. Lashof, and D. A. Hamburg. 1998. Re: "Is Gulf War syndrome due to stress? The evidence reexamined" [letter; comment]. Am J Epidemiol. 148(4):404-7.

Lallement, G., A. Foquin, D. Baubichon, M. F. Burckhart, P. Carpentier, and F. Canini. 1998. Heat stress, even extreme, does not induce penetration of pyridostigmine into the brain of guinea pigs. Neurotoxicology. 19(6):759-66.

Stress due to forced swimming was recently shown to allow penetration of pyridostigmine (PYR) into the brain of mice. Accordingly, it was suggested that in troops exposed to emotional stress under conditions of war, as during the Gulf War, the BBB may have unexpectedly become permeable to PYR thus leading to an increased frequency of CNS symptoms. In this study, the entry of PYR into the brain was investigated in guinea pigs subjected to different heat stress levels. In a first group, guinea pigs were maintained at room temperature for 2 hours, their core temperature remaining stable at about 39.8 degrees C. In a second group, animals were placed in a climatic chamber in order to keep their core temperature at 41.5 degrees C for 2 hours. In a third group, animals were subjected to a high ambient temperature (42.6 degrees C) during about 2 hours and developed heatstroke symptoms, their core temperature progressively increasing and reaching around 44.3 degrees C. In each group, the stress of the animals was assessed by measuring the increase of plasma cortisol level. PYR (0.2 mg/kg, s.c.) was injected 90 minutes after beginning the experiment. Penetration of the drug into the brain was examined by measurement of acetylcholinesterase (AChE) activity in the cortex, the striatum and the hippocampus of the animals 30 minutes after PYR administration. A passage of this drug into the brain was also evaluated autoradiographically after i.v. injection of tritiated PYR 90 minutes after the beginning of the experiment (100 microCi/animal). Whatever the group examined, no entry of PYR into the CNS could be detected. Exposure to an ambient temperature at 42.6 degrees C for 2 hours resulted by itself in a partial inhibition of cerebral AChE activity. Our results, which agree with previous data obtained in humans exposed to heat stress, are opposite to the recent research showing a central passage of PYR in mice following a forced swim stress test. This demonstrated that the penetration of PYR into the brain of rodents under stress depends on the experimental

conditions used (animal species, nature of the stressor, etc.). Extrapolations to humans of results primarily obtained in rodents about central passage of a drug under stress must thus be done very carefully.

Kroenke, K., P. Koslowe, and M. Roy. 1998. Symptoms in 18,495 Persian Gulf War veterans. Latency of onset and lack of association with self-reported exposures. J Occup Environ Med. 40(6):520-8.

Toxic or environmental exposures have been suggested as a possible cause of symptoms reported by Gulf War veterans. To further explore this hypothesis, we analyzed findings in 18,495 military personnel evaluated in the Department of Defense Comprehensive Clinical Evaluation Program. The program was established in 1994 to evaluate Persian Gulf veterans eligible for Department of Defense medical care who had health concerns after service in the Persian Gulf during Operation Desert Shield/Desert Storm. The evaluation included a structured clinical assessment, a physician-administered symptom checklist, and a patient questionnaire addressing self-reported exposures, combat experiences, and work loss. Among 18,495 patients examined, the most common symptoms were joint pain, fatigue, headache, memory or concentration difficulties, sleep disturbances, and rash. Symptom onset was often delayed, with two-thirds of symptoms not developing until after individuals returned from the Gulf War and 40% of symptoms having a latency period exceeding one year. There was no association between individual symptoms and patient demographics, specific self-reported exposures, or types of combat experience. Increased symptom counts were associated with work loss, the number of self-reported exposures, the number of types of combat experience, and certain ICD-9 diagnostic categories, particularly psychological disorders. Prolonged latency of symptom onset and the lack of association with any self-reported exposures makes illness related to toxic exposure less likely.

Knoke, J. D., G. C. Gray, and F. C. Garland. 1998. Testicular cancer and Persian Gulf War

service. Epidemiology. 9(6):648-53.

We studied whether regular, active-duty servicemen deployed to the Persian Gulf War were at increased risk of testicular cancer compared with nondeployed Gulf War-era servicemen from August 1991 through March 31, 1996, using a Cox proportional hazards model for survival analysis with covariates. Race was an important predictor of hospitalization for testicular cancer [rate ratio (RR) = 0.19; 95% confidence interval (CI) = 0.12-0.29 for blacks, and RR = 0.59; 95% CI = 0.39-0.91 for Hispanics, other, and unknown (combined), relative to whites]. Age effects were modest (RR = 1.19; 95% CI = 0.91-1.56 for those of ages 22- 25 years, and RR = 1.24; 95% CI = 0.96-1.59 for those of ages 26-31 years, compared with those of ages 17-21 years). Risk also varied with occupation (RR = 1.56; 95% CI = 1.23-2.00 for those in electronic equipment repair; RR = 1.26; 95% CI = 1.01-1.58 for those in electrical/mechanical repair; and RR = 1.42; 95% CI = 0.93-2.17 for those in construction-related trades, compared with those in other occupations). Deployment status was not important (RR = 1.05; 95% CI = 0.86-1.29 for the deployed compared with the nondeployed). There was an increase in testicular cancer in the deployed group in the immediate postwar period that was consistent with a previous report of a standardized RR of 2.12; 95% CI = 1.11-4.02 (compared with the nondeployed group) in the last 5 months of 1991, but by 4 years after the end of deployment, the cumulative risks for the two groups were not different. An additional analysis suggested that the immediate postwar increase in the deployed was likely due to regression to the mean after a healthy serviceman selection effect for deployment and the deferment of care during deployment.

Karczmar, A. 1998. Invited review: Anticholinesterases: dramatic aspects of their use and misuse. Neurochem Int. 32(5-6):401-11.

While the lore of anticholinesterases (antiChEs), particularly physostigmine and its natural source, the Calabar bean, is a subject of ethnomedicine and predates our scientific era, the

pharmacological development of physostigmine analogues and related agents and of the antiChEs of the organophosphorus (OP) type, is a matter of the last two centuries; this development has reached an exponential character in the last fifty years. This explosion relates to certain uses and misuses of these drugs and this aspect of antiChEs is the main focus of this article. Firstly, there is the matter of Senile Dementia of Alzheimer's Type (SDAT); while there are several clinical applications of antiChEs, their employment in the treatment of SDAT is the last and most intense foray in their medical history and this article will focus on the uses and misuses of antiChEs in this area. Secondly, the applied use of antiChEs as insecticides which coincided with the historical development of OP antiChEs was and is, of major significance for the agricultural economy of both advanced and underdeveloped countries, as this employment may mean the difference between life and starvation. However, there are notable dangers with this application of OP drugs, as will be emphasized in this article. Thirdly, there is the significant and tragic development of the OP drugs as warfare agents and tools for terrorists and rogue states and this article will discuss the several types of toxicity of OP agents and their mechanisms, the enigma of the Persian Gulf War Syndrome being particularly stressed. Altogether, the immense range of antiChE topics includes areas of great basic interest and of practical applications that are of significant benefit to mankind as well as of potential danger.

Hyman, E. S. 1998. Urinary sediment examination and Gulf War Syndrome [letter; comment]. Am J Med Sci. 316(6):411-3.

Haley, R. W. 1998. Point: bias from the "healthy-warrior effect" and unequal follow-up in three government studies of health effects of the Gulf War . Am J Epidemiol. 148(4):315-23.

Jamal, G. A. 1998. Gulf War syndrome--a model for the complexity of biological and environmental interaction with human health. Adverse Drug React Toxicol Rev. 17(1):1-17.

Since the end of the Gulf War, tens of thousands of American, Canadian and British soldiers who

participated in that war have claimed to be suffering from a variety of incapacitating symptoms which are generally termed as Gulf War Syndrome (GWS). The symptoms are multiple but mainly consist of excessive tiredness, muscle and joint pain, loss of balance, sensory symptoms, neurobehavioural manifestations, diarrhoea, bladder dysfunction, sweating disturbances, and respiratory, gastrointestinal, musculoskeletal and skin manifestations. These veterans have been exposed to a variety of damaging or potentially damaging risk factors including environmental adversities, pesticides such as organophosphate chemicals, skin insect repellents, medical agents such as pyridostigmine bromide (NAPS), possible low-levels of chemical warfare agents, multiple vaccinations in combinations, depleted uranium, and other factors. A large number of basic research findings, clinical epidemiological studies, and case control studies are reviewed to try and link them together to produce a coherent picture and to demonstrate the complexity of the interaction of biological systems, environmental and genetic factors, combinations of drugs and toxins with human health. The findings of these studies so far have demonstrated that many of the previous assumptions made about the 'safety' of certain drugs and toxic substances or vaccines must be radically reviewed. Many of the findings have far reaching implications not only in terms of explanation of what might have gone wrong during the Gulf War, but also have wider implications for many occupational groups who are exposed daily to some of these risk factors. More open-mindedness and much less prejudice are required concerning the basic biology of interactions of the above factors and their effects on cell functions and wider intelligent research is urgently required with high priority. This review highlights the importance of intelligent research for answers for a new phenomenon, and demonstrates the necessity for a combination of this approach with high quality epidemiological research. The reader will notice an emerging clear picture that the majority (if not all) of these advances have been achieved from studies funded by independent or charity organizations rather than by the responsible authorities who are supposed and are duty bound to take on this task.

Gray, G. C., A. W. Hawksworth, T. C. Smith, H. K. Kang, J. D. Knoke, and G. D. Gackstetter. 1998. Gulf War Veterans' Health Registries. Who is most likely to seek evaluation? Am J Epidemiol. 148(4):343-9.

Since the Persian Gulf War ended in 1991, many veterans have sought medical evaluation in the Department of Veterans Affairs Persian Gulf Veterans' Health Registry (VA registry) or the Department of Defense's Comprehensive Clinical Evaluation Program (DoD registry). Using combined data collected from 1993 to 1997 from the VA and DoD registries, the authors compared the characteristics of registry participants (n=74,653) with those of all Gulf War veterans (n=696,531) to determine the personnel most likely to seek medical evaluation. Using multiple logistic regression, the authors found that service branch and type were strongly associated with registry participation, with Army (adjusted odds ratio (OR)=4.7, 95% confidence interval (CI) 4.6-4.9) and National Guard (OR=2.6, 95% CI 2.5-2.6) personnel at highest odds compared with reference category personnel. Registry participants also were more likely to have been stationed in the Gulf War theater during the fighting (OR=2.2), to be older (>31 years/22 years OR=2.1), to have been an enlisted person (OR=2.0), to have been construction workers (OR=1.3), to be female (OR=1.3), and to have been hospitalized during the 12-month period before the war (OR=1.2). These findings are useful in generating hypotheses regarding postwar morbidity. They also suggest that subpopulations of Gulf War veterans have a higher prevalence of symptoms and merit further study.

Fukuda, K., R. Nisenbaum, G. Stewart, W. W. Thompson, L. Robin, R. M. Washko, D. L. Noah, D. H. Barrett, B. Randall, B. L. Herwaldt, A. C. Mawle, and W. C. Reeves. 1998. Chronic multisymptom illness affecting Air Force veterans of the Gulf War . Jama. 280(11):981-8.

CONTEXT: Gulf War (GW) veterans report nonspecific symptoms significantly more often than their nondeployed peers. However, no specific disorder has been identified, and the etiologic basis and clinical significance of their symptoms remain unclear. OBJECTIVES: To organize symptoms reported by US Air Force GW veterans into a case definition, to characterize clinical features, and to evaluate risk factors. DESIGN: Cross-sectional population survey of individual

characteristics and symptoms and clinical evaluation (including a structured interview, the Medical Outcomes Study Short Form 36, psychiatric screening, physical examination, clinical laboratory tests, and serologic assays for antibodies against viruses, rickettsia, parasites, and bacteria) conducted in 1995. PARTICIPANTS AND SETTING: The cross-sectional questionnaire survey included 3723 currently active volunteers, irrespective of health status or GW participation, from 4 air force populations.The cross-sectional clinical evaluation included 158 GW veterans from one unit, irrespective of health status. MAIN OUTCOME MEASURES: Symptom-based case definition; case prevalence rate for GW veterans and nondeployed personnel; clinical and laboratory findings among veterans who met the case definition. RESULTS: We defined a case as having 1 or more chronic symptoms from at least 2 of 3 categories (fatigue, mood-cognition, and musculoskeletal). The prevalence of mild-to-moderate and severe cases was 39% and 6%, respectively, among 1155 GW veterans compared with 14% and 0.7% among 2520 nondeployed personnel. Illness was not associated with time or place of deployment or with duties during the war. Fifty-nine clinically evaluated GW veterans (37%) were noncases, 86 (54%) mild-to- moderate cases, and 13 (8%) severe cases. Although no physical examination, laboratory, or serologic findings identified cases, veterans who met the case definition had significantly diminished functioning and well-being. CONCLUSIONS: Among currently active members of 4 Air Force populations, a chronic multisymptom condition was significantly associated with deployment to the GW. The condition was not associated with specific GW exposures and also affected nondeployed personnel.

Escalante, A., and M. Fischbach. 1998. Musculoskeletal manifestations, pain, and quality of life in Persian Gulf War veterans referred for rheumatologic evaluation . J Rheumatol. 25(11):2228-35.

OBJECTIVE: Pain in the joints and other areas has been a frequent complaint among veterans of Operation Desert Storm who are experiencing unexplained illness. We characterized the rheumatic manifestations of a group of veterans of the Persian Gulf War who were referred to a

rheumatology clinic. METHODS: Consecutive South Texas veterans of the Persian Gulf War who were referred for evaluation of rheumatic manifestations underwent a comprehensive evaluation of their musculoskeletal symptoms, pain, and health related quality of life. RESULTS: Of 928 veterans evaluated in a screening clinic for unexplained symptoms, 145 had rheumatic manifestations (15.6%) and were referred to a rheumatology clinic. The most common diagnosis was fibromyalgia, present in 49 patients (33.8%), followed by various soft tissue problems in 25 (17.2%), nonspecific arthralgias in 14 (9.6%), and clinical or radiographic osteoarthritis in 16 (11.0%). In 39 patients (26.9%), no symptoms were present at the time of the evaluation, a careful musculoskeletal examination and laboratory tests were normal, and no diagnosis was possible. Two patients had Reiter's syndrome. Four had a positive rheumatoid factor and 3 had antinuclear antibodies, but none of these had clinical evidence of rheumatoid arthritis or systemic lupus erythematosus. Pain was present in nearly all patients and was widely distributed, with no body area spared in this group of patients. The most frequent painful areas were the knees in > 65%, the lower back in > 60%, the shoulders in 50%, and the hands and wrists in 35%. Widespread body pain was present in 65.1% of the veterans. Average values of all 8 scales measured by the SF-36 health survey were below the 25th percentile of published national norms, with pain and the number of nonarticular rheumatic symptoms explaining most of the decreased health related quality of life in the veterans we evaluated. CONCLUSION: No specific rheumatic diagnosis is characteristic of Gulf War veterans with unexplained illness referred to a rheumatology clinic. However, pain is common and widespread in these patients, and their health related quality of life is poor. Further research is necessary to determine the cause of the symptoms of veterans of the Gulf War.

Engel, C. C., Jr., M. Roy, D. Kayanan, and R. Ursano. 1998. Multidisciplinary treatment of persistent symptoms after Gulf War service. Mil Med. 163(4):202-8.

Research suggests that individuals commonly describe persistent symptoms or syndromes after a war. After the Persian Gulf War, the Department of Veterans Affairs and the Department of

Defense initiated registries and expedited health care for those with Gulf War-related health concerns. At Walter Reed Army Medical Center, the Gulf War Health Center was created in mid-1994 to contribute a continuum of care for those with Gulf War-related health problems. The purpose of this report is to describe the Gulf War Health Center's Specialized Care Program, a 3-week intensive outpatient multidisciplinary treatment program for people with persistent, disabling Gulf War-related symptoms. The program uses an evidence-based model of multidisciplinary care employed at chronic pain centers internationally and shown to yield stable improvements in pain, mood, health care use, and return to work rates. A patient is described to illustrate how the program works. Finally, a Deployment Medicine Treatment Center is proposed, a multidisciplinary treatment center like the Specialized Care Program that would offer care to those with persistent, disabling symptoms after all future deployments.

Deming, Q. B. 1998. Urinary sediment examination and Gulf War Syndrome [letter; comment]. Am J Med Sci. 316(6):411; discussion 412-3.

Kurt, T. L. 1998. Epidemiological association in US veterans between Gulf War illness and exposures to anticholinesterases. Toxicol Lett. 102-103:523-6.

To investigate complaints of Gulf War veterans, epidemiologic, case- control and animal modeling studies were performed. Looking for OPIDP variants, our epidemiologic project studied 249 Naval Reserve construction battalion (CB24) men. Extensive surveys were drawn for symptoms and exposures. An existing test (PAI) was used for neuropsychologic. Using FACTOR, LOGISTIC and FREQ in 6.07 SAS, symptom clusters were sought with high eigenvalues from orthogonally rotated two-stage factor analysis. After factor loadings and Kaiser measure for sampling adequacy (0.82), three major and three minor symptom clusters were identified. Internally consistent by Cronbach's coefficient, these were labeled syndromes: (1)

impaired cognition; (2) confusion-ataxia; (3) arthro-myo-neuropathy; (4) phobia-apraxia; (5) fever-adenopathy; and (6) weakness-incontinence. Syndrome variants identified 63 patients (63/249, 25%) with 91 syndromes. With pyridostigmine bromide as the drug in these drug-chemical exposures, syndrome chemicals were: (1) pesticide-containing flea and tick collars (P 0.001); (2) alarms from chemical weapons attacks (P 0.001), being in a sector later found to have nerve agent exposure (P 0.04); and (3) insect repellent (DEET) (P 0.001). From CB24, 23 cases, 10 deployed and 10 non-deployed controls were studied. Auditory evoked potentials showed dysfunction (P 0.02), nystagmic velocity on rotation testing, asymmetry on saccadic velocity (P 0.04), somatosensory evoked potentials both sides (right P 0.03, left P 0.005) and synstagmic velocity after caloric stimulation bilaterally (P-range, 0.02-0.04). Brain dysfunction was shown on the Halstead Impairment Index (P 0.01), General Neuropsychological Deficit Scale (P 0.03) and Trail Making part B (P 0.03). Butylcholinesterase phenotypes did not trend for inherent abnormalities. Parallel hen studies at Duke University established similar drug-chemical delayed neurotoxicity. These investigations lend credibility that sublethal exposures to drug-chemical combinations caused delayed-onset neurotoxic variants.

Cannova, J. V. 1998. Multiple giant cell tumors in a patient with Gulf War syndrome. Mil Med. 163(3):184-5.

"Persian Gulf syndrome" refers to a group of clinical findings found in military personnel who served in the Persian Gulf War. The most commonly reported symptoms include chronic fatigue, headache, and neurologic disorders. Recently, new information has linked Whipple's disease and Ki-1 anaplastic large cell lymphoma to this syndrome. Presented here is an unusual case of multiple giant cell tumors of the hand in a patient with documented Persian Gulf syndrome. The epidemiologic significance between these two entities is unclear, because this is a single reported case. However, the practical message is clear. Physicians must meticulously evaluate patients who are veterans of the Persian Gulf conflict to further our understanding and confirm the existence of this syndrome.

Medinger, A. E., T. W. Chan, A. Arabian, and P. K. Rohatgi. 1998. Interpretive algorithms for the symptom-limited exercise test: assessing dyspnea in Persian Gulf war veterans. Chest. 113(3):612-8.

Interpretation of symptom-limited exercise testing requires analysis of a large body of simultaneously recorded cardiopulmonary data. Karlman Wasserman has recommended an algorithmic approach to interpretation (WA) that leads to a dichotomous choice between pulmonary and cardiovascular impairment. An alternative algorithm published by William Eschenbacher (EA) provides for concurrent assessment of cardiovascular and pulmonary exercise impairment. We analyzed a group of 29 individuals referred to the Pulmonary Physiology Laboratory at the Washington Veterans Affairs Medical Center for evaluation of dyspnea following service in the Persian Gulf War to assess the concordance of the two algorithms in determining the cause of dyspnea and exercise impairment in these individuals. They each performed a progressive, ramped, symptom-limited exercise test on a bike for a minimum of 6 min. Exercise measurements were analyzed by both interpretive algorithms. Concordance was found in 28% of tests. The greatest discordance occurred in identifying pulmonary limitation. Eleven had pulmonary limitation by EA; of these, WA found 1 to have pulmonary limitation, 5 to be normal, 4 indeterminate, and 1 musculoskeletal limitation. Of the 11 with pulmonary limitation by EA, but not by WA, 5 had abnormal resting pulmonary function measurements. Analysis of the differences between these two interpretive approaches is given. The EA algorithm may be more sensitive for detecting exercise impairment of pulmonary origin, but its specificity remains to be determined.

Bell, I. R., L. Warg-Damiani, C. M. Baldwin, M. E. Walsh, and G. E. Schwartz. 1998. Self-reported chemical sensitivity and wartime chemical exposures in Gulf War veterans with and without decreased global health ratings. Mil Med. 163(11):725-32.

This cross-sectional telephone survey study assessed prevalence rates of current chemical sensitivity, frequency of chemical odor intolerance, and self-reported Persian Gulf chemical exposures among 41 randomly sampled Department of Veterans Affairs outpatients who were Persian Gulf War (PGW) and PGW-era veterans. The participants were drawn from an initial random list of 100 veterans, of whom 28 PGW and 20 era veterans had correct telephone data on file. Of those contacted, 86% of PGW veterans (24/28) and 85% of era veterans (17/20) agreed to participate. Significantly more PGW veterans with poorer global health after military service reported considering themselves now "especially sensitive to certain chemicals" (86%, 12/14) than did the PGW veterans or era veterans in stable health (both comparison groups 30%, 3/10). Among PGW veterans, the subset with worse health associated with marked increases in chemical odor intolerance since their military service had a significantly higher odds ratio for exposure to multiple chemicals, notably wartime pesticides and insect repellent, than did comparison groups. The high rate of chemical sensitivity of PGW veterans with deteriorated health is almost three times that in PGW-era veterans and in elderly primary care outpatient veterans at the same Department of Veterans Affairs medical center and in community-based civilian samples (i.e., 30%). These preliminary findings suggest the need for further study of chemical sensitivity, including tests for acquired increases in neural sensitizability to multiple low-level chemicals, in ill PGW veterans.

Bell, I. R., R. Patarca, C. M. Baldwin, N. G. Klimas, G. E. Schwartz, and E. E. Hardin. 1998. Serum neopterin and somatization in women with chemical intolerance, depressives, and normals. Neuropsychobiology. 38(1):13-8.

The symptom of intolerance to low levels of environmental chemicals (CI, chemical intolerance) is a feature of several controversial polysymptomatic conditions that overlap symptomatically with depression and somatization, i.e., chronic fatigue syndrome, fibromyalgia, multiple chemical

sensitivity, and Persian Gulf syndrome. These syndromes can involve many somatic symptoms consistent with possible inflammation. Immunological or neurogenic triggering might account for such inflammation. Serum neopterin, which has an inverse relationship with l-tryptophan availability, may offer a marker of inflammation and macrophage/monocyte activation. This study compared middle-aged women with CI (who had high levels of affective distress; n = 14), depressives without CI (n = 10), and normals (n = 11). Groups did not differ in 4 p.m. resting levels of serum neopterin. However, the CI alone had strong positive correlations between neopterin and all of the scales measuring somatization. These preliminary findings suggest the need for additional research on biological correlates of 'unexplained' multiple somatic symptoms in subtypes of apparent somatizing disorders.

Alloway, J. A., S. A. Older, D. F. Battafarano, and M. T. Carpenter. 1998. Persian Gulf War myalgia syndrome [letter; comment]. J Rheumatol. 25(2):388-9.

Weiss, B. 1998. Neurobehavioral properties of chemical sensitivity syndromes. Neurotoxicology. 19(2):259-68.

Chemical sensitivity Syndromes refers to aggregations of symptoms marked by largely subjective neurobehavioral complaints and hypothesized links to immune system dysfunction. The entities reviewed here consist of the Multiple Chemical Sensitivity Syndrome, the Sick Building Syndrome, the Chronic Fatigue Syndrome, and the Gulf War Syndrome. Except for the Chronic Fatigue Syndrome, toxic chemical exposures are accorded a significant role in their etiology. The connections are ambiguous because of the variety of chemical agents cited and, for the most part, the relatively low levels at which exposures occur. Conventional clinical signs are also typically lacking. Explanatory mechanisms include psychiatric diagnoses such as somatization, behavioral mechanisms such as conditioning and generalization, neuropharmacological mechanisms such as sensitization, and psychoneuroimmunological mechanisms such as those involving the hypothalamic-pituitary-adrenal axis. Laboratory animal experimentation and controlled clinical

trials, especially with inhaled material, provide the means for exploring the proffered explanations.

Servatius, R. J., J. E. Ottenweller, D. Beldowicz, W. Guo, G. Zhu, and B. H. Natelson. 1998. Persistently exaggerated startle responses in rats treated with pyridostigmine bromide. J Pharmacol Exp Ther. 287(3):1020-8.

Troops in the Persian Gulf War have registered complaints consistent with CNS dysfunction that emerged after returning from the Gulf. A common experience among Persian Gulf War veterans was exposure to pyridostigmine bromide (PB) for prophylaxis against nerve gas exposure. To determine whether PB causes emergent CNS dysfunction, Wistar-Kyoto (WKY) and Sprague-Dawley (SD) rats were given PB for 7 consecutive days in their drinking water. The WKY, but not the SD, rats exhibited a delayed-onset, persistently exaggerated startle response. The WKY rats exhibited exaggerated startle responses that appeared 15 days after the end of PB treatment and were still evident 22 days after the end of treatment. Both the duration and the magnitude of the exaggerated startle responses were related to the dosage of PB. The PB-treated rats exhibited normal short-term and long-term habituation. However, exaggerated startle responses were related to the development of enhanced short-term sensitization. Treating the rats for a second time, 7 weeks after the end of the first PB treatment, induced an exaggerated startle response that appeared sooner and dissipated faster than was evident after the first PB treatment. Inasmuch as the WKY rat has inherently low butyrylcholinesterase activity, a scavenger for PB, these results suggest that prophylactic PB may influence CNS function in individuals with low butyrylcholinesterase activity. Elaboration of the factors that mediate enhanced sensitization in the WKY rat may provide insight into some of the complaints registered by veterans of the Persian Gulf War.

Schumacher, H. R., Jr. 1998. Patients with "Gulf War syndrome." Even without etiologic answers

treatment studies are needed [editorial; comment]. J Rheumatol. 25(11):2059-61.

Wolfe, J., S. P. Proctor, R. F. White, and M. J. Friedman. 1998. Re: "Is Gulf War syndrome due to stress? The evidence reexamined" [letter; comment]. Am J Epidemiol. 148(4):402-3.

Sapolsky, R. M. 1998. The stress of Gulf War syndrome [news; comment]. Nature. 393(6683):308-9.

1997

David, A., S. Ferry, and S. Wessely. 1997. Gulf war illness [editorial] . Bmj. 314(7076):239-40.

Charp, P. A. 1997. Al Eskan disease: Persian Gulf syndrome [letter; comment]. Mil Med. 162(3):ii.

Benschop, H. P., G. P. van der Schans, D. Noort, A. Fidder, R. H. Mars-Groenendijk, and L. P. de Jong. 1997. Verification of exposure to sulfur mustard in two casualties of the Iran-Iraq conflict. J Anal Toxicol. 21(4):249-51.

The exposure of two Iranian victims of the Iran-Iraq conflict (1980- 1988) to sulfur mustard was established by immunochemical and mass spectrometric analysis of blood samples taken 22 and

26 days after alleged exposure. One victim suffered from skin injuries compatible with sulfur mustard intoxication but did not have lung injuries; the symptoms of the other victim were only vaguely compatible with sulfur mustard intoxication. Both patients recovered. Immunochemical analysis was based on detection of the N7-guanine adduct of the agent in DNA from lymphocytes and granulocytes, whereas the N-terminal valine adduct in globin was determined by gas chromatography-mass spectrometry after a modified Edman degradation. The valine adduct levels correspond with those found in human blood after in vitro treatment with 0.9 microM sulfur mustard.

Baynes, R. E., K. B. Halling, and J. E. Riviere. 1997. The influence of diethyl-m-toluamide (DEET) on the percutaneous absorption of permethrin and carbaryl. Toxicol Appl Pharmacol. 144(2):332-9.

Simultaneous exposure to DEET and permethrin was recently proposed to be associated with the "Gulf War Syndrome." However, no studies have reported the percutaneous absorption of DEET and permethrin when applied simultaneously to the skin as a mixture, the relevant route of exposure in the Persian Gulf. The present study quantitates percutaneous absorption of DEET and permethrin after coadministration to rodent and pig skin in vitro. Dosing solutions were also prepared with either acetone, dimethyl sulfoxide (DMSO), or ethanol to compare vehicle effects on percutaneous absorption of permethrin and DEET. The influence of DEET on carbaryl absorption and dermal disposition was also assessed in pig studies to statistically demonstrate DEET effects in acetone or DMSO and different solvent concentrations. Topical application of permethrin + DEET resulted in absorption of DEET (1-20% dose), but no permethrin. Permethrin (1.2-1.7% dose) was detected only when mouse skin was dosed solely with permethrin, a finding suggesting that DEET decreased permethrin absorption. DEET also inhibited carbaryl absorption in acetone mixtures, but had no effect on DMSO mixtures. Irrespective of solvent, DEET did not enhance carbaryl penetration into skin. For DEET, absorption was greater in mouse skin (10.7-20.6% dose) than in rat skin (1.1-5.2% dose) and pig skin (2.8% dose). The extent of DEET

absorption was greater with DMSO and acetone than with ethanol in rat and mouse skin. These studies support DEET, but not permethrin or carbaryl, as having sufficient systemic exposure to potentially cause signs of toxicity when simultaneously applied with pesticides. Furthermore, these studies demonstrated that DEET does not necessarily enhance dermal absorption of all toxicants as was originally hypothesized.

Axelrod, B. N., and I. B. Milner. 1997. Neuropsychological findings in a sample of Operation Desert Storm veterans. J Neuropsychiatry Clin Neurosci. 9(1):23-8.

In response to ongoing complaints of memory, attention, and problem- solving difficulties among veterans of Operation Desert Storm and Shield (ODSS), a sample of 44 male veterans of ODSS underwent a comprehensive neuropsychological evaluation. Deficits relative to normative data were observed only on finger dexterity (Grooved Pegboard, bilaterally) and the Stroop Color and Word Test. Those with impaired Pegboard performance had lower performance on other tasks requiring psychomotor speed. Those with impaired Stroop had significantly lower motor and set-shifting performance. Scores of both impaired groups were higher on many clinical and supplemental scales of the MMPI. Despite subjective cognitive complaints reported in 39% of the overall sample, veterans with cognitive complaints differed from their peers primarily in greater psychological distress as depicted on the MMPI. The data are presented as preliminary clinical findings.

Beale, P. 1997. Gulf War illness. Why it took so long to decide to investigate [letter] . Bmj. 314(7086):1041.

Amato, A. A., A. McVey, C. Cha, E. C. Matthews, C. E. Jackson, R. Kleingunther, L. Worley, E. Cornman, and K. Kagan-Hallet. 1997. Evaluation of neuromuscular symptoms in veterans of the Persian Gulf War. Neurology. 48(1):4-12.

OBJECTIVE: To comprehensively evaluate complaints of muscle fatigue, weakness, and myalgias in Persian Gulf veterans (PGV). BACKGROUND: Approximately 700,000 American troops were deployed to the Persian Gulf during Desert Shield and Desert Storm. Upon return from the Gulf, some PGV developed unexplained illnesses, and special referral centers were established for the evaluation of these patients. Among the most common symptoms of these PGV are fatigue, weakness, and myalgias. An Institute of Medicine committee recommended further exploration into the possible etiologies of these complaints. METHODS: Twenty PGV with severe muscle fatigue, weakness, or myalgias that interfered with their daily activities were referred for an extensive prospective neuromuscular evaluation. Routine laboratory studies included serum creatine kinase (CK), erythrocyte sedimentation rate, thyroid function tests, and exercise forearm tests. All patients received nerve conduction studies (NCS), repetitive nerve stimulation, quantitative and single-fiber electromyography (EMG), and muscle biopsies. RESULTS: Manual muscle strength examinations were normal in all patients. Six patients had mildly elevated CKs (range 223 to 768 IU/l); otherwise, laboratory tests were unremarkable. NCS were normal except in 2 patients with carpal tunnel syndrome. Quantitative EMGs were normal. One patient had mildly increased jitter on single-fiber EMG. Muscle biopsies demonstrated minor nonspecific abnormalities in 5 patients (i.e., increased central nuclei, rare necrotic fibers, tubular aggregates). CONCLUSIONS: Despite severe subjective symptoms, most of our patients had no objective evidence of neuromuscular disease. Mildly increased CKs or nonspecific histologic abnormalities on muscle biopsy were evident in 8 patients but were not believed to be clinically significant in most. We found no evidence of a specific neuromuscular disorder in any patient. Exposures to toxins during the Persian Gulf War were not likely responsible for our patients' symptoms.

Amato, A. A., C. Jackson, and A. McVey. 1997. Identification of Gulf War syndrome: methodological issues and medical illnesses [letter; comment]. Jama. 278(5):384-5; discussion 385-7.

1997. Self-reported illness and health status among Gulf War veterans. A population-based study. The Iowa Persian Gulf Study Group . Jama. 277(3):238-45.

OBJECTIVE: To assess the prevalence of self-reported symptoms and illnesses among military personnel deployed during the Persian Gulf War (PGW) and to compare the prevalence of these conditions with the prevalence among military personnel on active duty at the same time, but not deployed to the Persian Gulf (non-PGW). DESIGN: Cross-sectional telephone interview survey of PGW and non-PGW military personnel. The study instrument consisted of validated questions, validated questionnaires, and investigator-derived questions designed to assess relevant medical and psychiatric conditions. SETTING: Population-based sample of military personnel from Iowa. STUDY PARTICIPANTS: A total of 4886 study subjects were randomly selected from 1 of 4 study domains (PGW regular military, PGW National Guard/Reserve, non-PGW regular military, and non-PGW National Guard/Reserve), stratifying for age, sex, race, rank, and branch of military service. MAIN OUTCOME MEASURES: Self-reported symptoms and symptoms of medical illnesses and psychiatric conditions. RESULTS: Overall, 3695 eligible study subjects (76%) and 91% of the located subjects completed the telephone interview. Compared with non-PGW military personnel, PGW military personnel reported a significantly higher prevalence of symptoms of depression (17.0% vs 10.9%; Cochran-Mantel-Haenszel test statistic, P.001), posttraumatic stress disorder (PTSD) (1.9% vs 0.8%, P=.007), chronic fatigue (1.3% vs 0.3%, P.001), cognitive dysfunction (18.7% vs 7.6%, P.001), bronchitis (3.7% vs 2.7%, P.001), asthma (7.2% vs 4.1%, P=.004), fibromyalgia (19.2% vs 9.6%, P.001), alcohol abuse (17.4% vs 12.6%, P=.02), anxiety (4.0% vs 1.8%, P.001), and sexual discomfort (respondent, 1.5% vs 1.1%, P=.009; respondent's female partner, 5.1% vs 2.4%, P.001). Assessment of health-related quality of life demonstrated diminished mental and physical functioning scores for PGW military personnel. In almost all cases, larger differences between PGW and non-PGW military personnel were observed in the National Guard/Reserve comparison. Within the PGW military study population, compared with veterans in the regular military, veterans in the National Guard/Reserve only reported more symptoms of chronic fatigue (2.9% vs 1.0%, P=.03) and

alcohol abuse (19.4% vs 17.0%, P=.004). CONCLUSIONS: Military personnel who participated in the PGW have a higher self-reported prevalence of medical and psychiatric conditions than contemporary military personnel who were not deployed to the Persian Gulf. These findings establish the need to further investigate the potential etiologic, clinical, pathogenic, and public health implications of the increased prevalence of multiple medical and psychiatric conditions in populations of military personnel deployed to the Persian Gulf.

Gots, R. E., S. L. Schwartz, N. Hershkowitz, V. Chaudhry, and R. L. Vogel. 1997. Identification of Gulf War syndrome: methodological issues and medical illnesses [letter; comment]. Jama. 278(5):385; discussion 385-7.

Wegman, D. H., N. F. Woods, and J. C. Bailar. 1997. Invited commentary: how would we know a Gulf War syndrome if we saw one? [comment]. Am J Epidemiol. 146(9):704-11; discussion 712.

Wadman, M. 1997. Critics claim US inquiry was 'irreparably flawed' [news]. Nature. 390(6655):4.

Tiedt, T. N. 1997. The Nuremberg Code, informed consent, and involuntary treatment [letter; comment]. Jama. 277(9):712-3; discussion 713-4.

Schlesinger, N., D. G. Baker, and H. R. Schumacher, Jr. 1997. Persian Gulf War myalgia syndrome [letter] . J Rheumatol. 24(5):1018-9.

Schlesinger, N. 1997. Identification of Gulf War syndrome: methodological issues and medical illnesses [letter; comment]. Jama. 278(5):383; discussion 385-7.

Rook, G. A., and A. Zumla. 1997. Gulf War syndrome: is it due to a systemic shift in cytokine balance towards a Th2 profile? Lancet. 349(9068):1831-3.

The symptoms of Gulf War syndrome are compatible with the hypothesis that the immune system of affected individuals is biased towards a Th2- cytokine pattern. Factors that could lead to a Th2 shift among Gulf War veterans include exposure to multiple Th2-inducing vaccinations under stressful circumstances and the way in which such vaccinations were administered, which would be expected to maximise Th2 immunogenicity. These factors may have led to a long-term systemic shift towards a Th2- cytokine balance and to mood changes related to the immunoendocrine state. Other vaccines that lead to similar long-term, non-specific shifts in cytokine balance are well-established. If our hypothesis is proven, treatment may be possible with regimens that induce a systemic Th1 bias.

Gordon, V. 1997. Identification of Gulf War syndrome: methodological issues and medical illnesses [letter; comment]. Jama. 278(5):383; discussion 385-7.

Lockwood, A. H. 1997. Exposure to environmental toxins [editorial]. Curr Opin Neurol. 10(6):507-11.

Landrigan, P. J. 1997. Illness in Gulf War veterans. Causes and consequences [editorial; comment]. Jama. 277(3):259-61.

Korenyi-Both, A. L., and D. J. Juncer. 1997. Al Eskan disease: Persian Gulf syndrome. Mil Med. 162(1):1-13.

This article examines the potential relationship between Al Eskan disease and the Persian Gulf syndrome. Al Eskan disease, reported in Military Medicine in 1992, is a novel and previously unreported condition triggered by the exceptionally fine sand dust of the Central and Eastern Saudi Arabian peninsula. We repeat our study of the pathogenesis of Al Eskan disease to include

the ultrastructural and microanalytical study of the sand, aerobiological studies of the Kingdom of Saudi Arabia, and the etiology, symptoms, and prevalence of the disease. We conclude that immunodepression resulting from the continued presence of sand particles less than 1 micron in diameter in the lungs and bodies of Persian Gulf veterans explains not only the symptoms of the hyperegic lung condition of phase I and the symptoms of phase II of Al Eskan disease, but also provides an important clue to a common factor in most cases of Persian Gulf illnesses. We include a discussion of most of the commonly suspected agents in the Persian Gulf syndrome. In this case, we conclude that each of these factors, such as oil well fires, old-world diseases, or depleted uranium, are probably adjuvant or contributing causes. The only common exposure that would lead to recognition of the Persian Gulf syndrome as a single medical condition, rather than a catch-all phrase for unrelated conditions, appears to be exposure to the ubiquitous, fine sand of the area, and a resulting immunosuppression that is aggravated by opportunistic infections and other nonmicrobial ailments.

Khan, Z. U., L. Neil, R. Chandy, T. D. Chugh, H. Al-Sayer, F. Provost, and P. Boiron. 1997. Nocardia asteroides in the soil of Kuwait. Mycopathologia. 137(3):159-63.

A pilot study was undertaken to determine the occurrence and distribution of pathogenic nocardiae in Kuwaiti soil. A total of 102 soil samples collected from two localities were investigated by the paraffin bait technique. Nocardia asteroides was the only species isolated from 42 (41%) soil samples. None of the isolates fulfilled the criteria required for identification of N. farcinica or N. nova. Thirty one (73.8%) isolates showed equivalent growth at 45 degrees C and 35 degrees C, 17 (40.4%) isolates utilized acetamide for carbon and nitrogen requirements and 3 (7.1%) isolates showed delayed arylsulphatase activity. Only a solitary isolate was resistant to cefamandole. Soil samples originating from the Kuwait University Campus, Shuwaikh, which were rich in humus/organic matter, were more productive for N. asteroides (67%) than the samples which were devoid of it but were mixed with crude oil (39%). Sand samples that lacked organic matter and crude oil samples were least productive of N. asteroides. These preliminary

findings do not suggest that massive oil contamination of soil in the Ahmadi oil field area during the Gulf war promoted the natural occurrence of N. asteroides. However, isolation of N. asteroides in as many as 41% of the soil sample is a significant observation warranting further epidemiologic studies including its possible role in the operation desert storm sickness syndrome. This is the first report on the natural occurrence of N. asteroides in Kuwait.

Kaires, P. 1997. Identification of Gulf War syndrome: methodological issues and medical illnesses [letter; comment]. Jama. 278(5):385-7.

Peacock, M. D., M. J. Morris, M. A. Houghland, G. T. Anders, and H. M. Blanton. 1997. Sleep apnea-hypopnea syndrome in a sample of veterans of the Persian Gulf War. Mil Med. 162(4):249-51.

The prevalence of sleep apnea-hypopnea syndrome (SAHS) was investigated in a selected group of veterans of the Persian Gulf War at Brooke Army Medical Center. One hundred ninety-two self-referred patients participated in the full evaluation of the Comprehensive Clinical Evaluation Program (CCEP) for veterans of the Persian Gulf War. After completing an initial survey, an interview and examination were performed by staff internists. Forty-six participants with histories suggestive of a sleep disorder were referred for further evaluation. Those patients suspected of SAHS then completed a sleep disorders questionnaire and underwent standard nocturnal polysomnography (PSG). SAHS was defined as a respiratory disturbance index > or = 15 in a symptomatic patient. Fifteen of 46 patients undergoing PSG at this institution met criteria for SAHS. The majority of these patients had symptoms of fatigue and memory loss. Overall, 16 of the 192 patients (8.3%) in the CCEP of our institution were diagnosed with SAHS. SAHS may play a significant role in the symptom complex presented by many veterans of the Persian Gulf War.

Sillanpaa, M. C., L. M. Agar, I. B. Milner, E. C. Podany, B. N. Axelrod, and G. G. Brown. 1997. Gulf War veterans: a neuropsychological examination. J Clin Exp Neuropsychol. 19(2):211-9.

Eighty-two Persian Gulf War veterans seen in clinic were referred for neuropsychological evaluation. Relatedness of neuropsychological and neurological functioning to subjective complaint, exposure, a clinical signs index, and possible interference variables was examined in a subsample of 49 who completed assessment. The subsample was representative of the entire group with respect to symptom severity. Variables representing sustained attention, grip strength, motor coordination, vibratory sense, finger-tip number writing perception, executive functioning, memory functioning, and subjective complaint were considered. Neuropsychological performance appeared to be more related to emotional functioning than demographic variables or variables associated with the war. Individual differences may be contributing to different emotional reactions to illnesses, perceptions of exposure risks and cognitive functioning, and responses to stress.

Haley, R. W., T. L. Kurt, and J. Hom. 1997. Is there a Gulf War Syndrome? Searching for syndromes by factor analysis of symptoms [published erratum appears in JAMA 1997 Aug 6;278(5):388]. Jama. 277(3):215-22.

OBJECTIVE: To search for syndromes in Persian Gulf War veterans. PARTICIPANTS: Two hundred forty-nine (41%) of the 606 Gulf War veterans of the Twenty-fourth Reserve Naval Mobile Construction Battalion living in 5 southeastern states participated; 145 (58%) had retired from service, and the rest were still serving in the battalion. DESIGN: Participants completed a standardized survey booklet measuring the anatomical distributions or characteristics of each symptom, a booklet measuring wartime exposures, and a standard psychological personality

assessment inventory. Two-stage factor analysis was used to disentangle ambiguous symptoms and identify syndromes. MAIN OUTCOME MEASURES: Factor analysis-derived syndromes. RESULTS: Of 249 participants, 175 (70%) reported having had serious health problems that most attributed to the war, and 74 (30%) reported no serious health problems. Principal factor analysis yielded 6 syndrome factors, explaining 71% of the variance. Dichotomized syndrome indicators identified the syndromes in 63 veterans (25%). Syndromes 1 ("impaired cognition," characterized by problems with attention, memory, and reasoning, as well as insomnia, depression, daytime sleepiness, and headaches), 2 ("confusion-ataxia," characterized by problems with thinking, disorientation, balance disturbances, vertigo, and impotence), and 3 ("arthro-myo-neuropathy," characterized by joint and muscle pains, muscle fatigue, difficulty lifting, and extremity paresthesias) represented strongly clustered symptoms; whereas, syndromes 4 ("phobia-apraxia"), 5 ("fever- adenopathy"), and 6 ("weakness-incontinence") involved weaker clustering and mostly overlapped syndromes 2 and 3. Veterans with syndrome 2 were 12.5 times (95% confidence interval, 3.5-44.8) more likely to be unemployed than those with no health problems. A psychological profile, found in 48.4% of those with the syndromes, differed from posttraumatic stress disorder, depression, somatoform disorder, and malingering. CONCLUSION: These findings support the hypothesis that clusters of symptoms of many Gulf War veterans represent discrete factor analysis-derived syndromes that appear to reflect a spectrum of neurologic injury involving the central, peripheral, and autonomic nervous systems.

Haley, R. W., and T. L. Kurt. 1997. Self-reported exposure to neurotoxic chemical combinations in the Gulf War. A cross-sectional epidemiologic study . Jama. 277(3):231-7.

OBJECTIVE: To identify risk factors of factor analysis-derived Gulf War- related syndromes. DESIGN: A cross-sectional survey. PARTICIPANTS: A total of 249 Gulf War veterans from the Twenty-fourth Reserve Naval Mobile Construction Battalion. DATA COLLECTION: Participants completed standardized booklets measuring self-reported wartime exposures and present symptoms. MAIN OUTCOME MEASURES: Associations of factor analysis-derived

syndromes with risk factors for chemical interactions that inhibit butyrylcholinesterase and neuropathy target esterase. RESULTS: Risk of syndrome 1 ("impaired cognition") was greater in veterans who reported wearing flea collars during the war (5 of 20, 25%) than in those who never wore them (7 of 229, 3%; relative risk [RR], 8.7; 95% confidence interval [CI], 3.0-24.7; P.001). Risk of syndrome 2 ("confusion-ataxia") increased with a scale of advanced adverse effects from pyridostigmine bromide (chi2 for trend, P.001), was greater among veterans who believed they had been involved in chemical weapons exposure (18 of 108, 17%) than in those who did not (3 of 141, 2%; RR, 7.8; 95% CI, 2.3-25.9; P.001), and was increased in veterans who had been in a sector of far northeastern Saudi Arabia on the fourth day of the air war (6 of 21, 29%) than in those who had not been (15 of 228, 7%; RR, 4.3; 95% CI, 1.9-10.0; P=.004). Effects of perceived chemical weapons exposure and advanced adverse effects from pyridostigmine were synergistic (Rothman S, 5.3; 95% CI, 1.04-26.7). Risk of syndrome 3 ("arthro-myo-neuropathy") increased with an index of frequency and amount of government-issued insect repellent containing 75% DEET (N,N-diethyl-m-toluamide) in ethanol applied during the war (chi2 for trend, P.001) and with advanced adverse effects from pyridostigmine (chi2 for trend, P.001). CONCLUSION: Some Gulf War veterans may have delayed, chronic neurotoxic syndromes from wartime exposure to combinations of chemicals that inhibit butyrylcholinesterase and neuropathy target esterase.

Haley, R. W., J. Hom, P. S. Roland, W. W. Bryan, P. C. Van Ness, F. J. Bonte, M. D. Devous, Sr., D. Mathews, J. L. Fleckenstein, F. H. Wians, Jr., G. I. Wolfe, and T. L. Kurt. 1997. Evaluation of neurologic function in Gulf War veterans. A blinded case- control study . Jama. 277(3):223-30.

OBJECTIVE: To determine whether Gulf War-related illnesses are associated with central or peripheral nervous system dysfunction. DESIGN: Nested case-control study. PARTICIPANTS: Twenty-three veterans with factor analysis-derived syndromes (the cases), 10 well veterans deployed to the Gulf War (the deployed controls), and 10 well veterans not deployed to the Gulf

War (the nondeployed controls). METHOD: With investigators blinded to group identities, participants underwent objective neurophysiological, audiovestibular, neuroradiological, neuropsychological, and blood tests. MAIN OUTCOME MEASURES: Evidence of neurologic dysfunction. RESULTS: Compared with the 20 controls, the 23 cases had significantly more neuropsychological evidence of brain dysfunction on the Halstead Impairment Index (P=.01), greater interside asymmetry of the wave I to wave III interpeak latency of brain stem auditory evoked potentials (P=.02), greater interocular asymmetry of nystagmic velocity on rotational testing, increased asymmetry of saccadic velocity (P=.04), more prolonged interpeak latency of the lumbar-to-cerebral peaks on posterior tibial somatosensory evoked potentials (on right side, P=.03, and on the left side, P=.005), and diminished nystagmic velocity after caloric stimulation bilaterally (P values range from .02 to .04). Cases (n=5) with syndrome 1 ("impaired cognition") were the most impaired on brain stem auditory evoked potentials (P=.005); those (n=13) with syndrome 2 ("confusion-ataxia") were the most impaired on the Halstead Impairment Index (P=.006), rotational testing (P=.01), asymmetry of saccadic velocity (P=.03), and somatosensory evoked potentials (P or =.01); and those (n=5) with syndrome 3 ("arthro-myo-neuropathy") were the most impaired on caloric stimulation (P or =.01). CONCLUSIONS: The 3 factor-derived syndromes identified among Gulf War veterans appear to represent variants of a generalized injury to the nervous system.

Haley, R. W. 1997. Is Gulf War syndrome due to stress? The evidence reexamined . Am J Epidemiol. 146(9):695-703.

Medical policy-makers have concluded that stress from wartime trauma and deployment constitutes an important cause of the chronic physical symptoms observed in US veterans who served in the Persian Gulf War. The author reviewed scientific articles from peer-reviewed journals referenced in the final report of the Presidential Advisory Committee on Gulf War Veterans' illnesses and conducted a MEDLINE literature search. All reported prevalence rates of post-traumatic stress disorder (PTSD) in Gulf War veterans were defined by critical cutpoints on

psychometric scales constructed by summing veterans' responses on standardized symptom questionnaires rather than by clinical psychiatric interviews. Observed PTSD rates varied from 0% to 36% (mean, 9%). Correcting for measurement errors with previously determined values of the sensitivity (range 0.77 to 0.96) and specificity (range 0.62 to 0.89) of the psychometric tests yielded estimated true PTSD rates of 0% for 18 of the 20 reported rates. Mean scores on the Mississippi PTSD scale in all subgroups of Gulf War veterans were within the range of values for well-adjusted Vietnam veterans (50-89) and far below that of Vietnam veterans with psychiatrically confirmed PTSD (120-140). Most PTSD and "stress-related symptoms" reported in studies of Gulf War veterans appear to represent false-positive errors of measurement reflecting nonspecific symptoms of other conditions.

1996

Fiedler, N., H. Kipen, B. Natelson, and J. Ottenweller. 1996. Chemical sensitivities and the Gulf War: Department of Veterans Affairs Research Center in basic and clinical science studies of environmental hazards. Regul Toxicol Pharmacol. 24(1 Pt 2):S129-38.

The purpose of the New Jersey Center for Environmental Hazards Research is to define the illness referred to as Persian Gulf Syndrome (PGS). Our preliminary data indicated that more than half of the Persian Gulf Registry (PGR) veterans reported illness characterized by severe fatigue and symptoms consistent with chemical sensitivities. Therefore, our research approach focuses on investigations of veterans with chronic fatigue syndrome (CFS) and multiple chemical sensitivities (MCS). Project 1 is an epidemiological study of 2800 PGR veterans. Symptoms, indices of Chronic Fatigue (CF) and Chemical Sensitivity (CS), and risk factors will be surveyed with mailed questionnaires. Risk factors include demographics, past medical history, psychosocial variables, Gulf War experiences such as prophylactic medication use, occupational and environmental exposures, and pesticide exposures. Symptoms will be clustered to define Gulf

War Syndromes. Significant associations between risk factors and these symptom clusters will also be investigated Subjects identified as CF, CS, or both will be recruited into Projects 2 and 3. In Project 2, healthy veterans will be compared to veterans with CF, CS, and CF concurrent with CS. Veterans will undergo four studies: (1) viral-immunological, (2) psychiatric, psychological, behavioral, and neuropsychological, (3) autonomic dysregulation, and (4) marker of P4501A2 induction resulting from exposure to combusting material. The purpose of Project 3 is to test the autonomic, immunologic, neuropsychologic, and psychologic responses of veterans with CS or CF to two stressors: controlled chemical exposure and exercise. CS subjects will undergo chemical exposures in our Controlled Environment Facility (CEF) to assess their biologic and psychologic response to low-level exposure. CF subjects will undergo a maximal treadmill exercise test. Circadian patterns of catecholamines and axillary temperature, viral burden, and cardiovascular and endocrine reactivity will be measured in response to this physical stressor. Project 4 is an animal study evaluating the interaction between stress and pathology/physiology when rats are predisposed to disease by exposure to Soman or to Dioxin. Two strains of rats that differ in stress reactivity will be used to determine the interaction of hereditary factors and chemical exposure.

Friedman, H. D. 1996. Two Persian Gulf veterans with lymphadenopathy [letter]. Arch Pathol Lab Med. 120(5):425.

Hyams, K. C., F. S. Wignall, and R. Roswell. 1996. War syndromes and their evaluation: from the U.S. Civil War to the Persian Gulf War. Ann Intern Med. 125(5):398-405.

PURPOSE: To better understand the health problems of veterans of the Persian Gulf War by analyzing previous war-related illnesses and identifying possible unifying factors. DATA SOURCE: English-language articles and books on war-related illnesses published since 1863 that were located primarily through a manual search of bibliographies. DATA EXTRACTION: Publications were assessed for information on the clinical characteristics of war-related illnesses

and the research methods used to evaluate such illnesses. DATA SYNTHESIS: Poorly understood war syndromes have been associated with armed conflicts at least since the U.S. Civil War. Although these syndromes have been characterized by similar symptoms (fatigue, shortness of breath, headache, sleep disturbance, forgetfulness, and impaired concentration), no single recurring illness that is unrelated to psychological stress is apparent. However, many types of illness were found among evaluated veterans, including well-defined medical and psychiatric conditions, acute combat stress reaction, post-traumatic stress disorder, and possibly the chronic fatigue syndrome. No single disease is apparent, but one unifying factor stands out: A unique population was intensely scrutinized after experiencing an exceptional, life-threatening set of exposures. As a result, research efforts to date have been unable to conclusively show causality, have been subject to reporting bias, and have lacked similar control populations. In addition to research limitations, war syndromes have involved fundamental, unanswered questions about the importance of chronic somatic symptoms and the factors that create a personal sense of ill health. CONCLUSION: Until we can better understand what constitutes health and illness in all adult populations, we risk repeated occurrences of unexplained symptoms among veterans after each war.

Goldstein, G., S. R. Beers, L. A. Morrow, W. J. Shemansky, and S. R. Steinhauer. 1996. A preliminary neuropsychological study of Persian Gulf veterans. J Int Neuropsychol Soc. 2(4):368-71.

A neuropsychological investigation of 21 Persian Gulf veterans and 38 demographically matched controls was conducted in order to make a preliminary determination concerning presence of neuropsychological deficits associated with the Persian Gulf War experience. The neuropsychological test battery consisted of measures of complex attention, memory, and motor skills previously shown to be sensitive to exposure to environmental toxins. It was found that the Persian Gulf veteran group did not demonstrate substantial impairment, but an impairment index derived from 14 test variables was statistically significantly different from controls in the

direction of poorer performance.

Fiedler, N., H. Kipen, B. Natelson, and J. Ottenweller. 1996. Chemical Sensitivities and the Gulf War: Department of Veterans Affairs Research Center in Basic and Clinical Science Studies of Environmental Hazards. Regul Toxicol Pharmacol. 24(1):S129-38.

The purpose of the New Jersey Center for Environmental Hazards Research is to define the illness referred to as Persian Gulf Syndrome (PGS). Our preliminary data indicated that more than half of the Persian Gulf Registry (PGR) veterans reported illness characterized by severe fatigue and symptoms consistent with chemical sensitivities. Therefore, our research approach focuses on investigations of veterans with chronic fatigue syndrome (CFS) and multiple chemical sensitivities (MCS). Project 1 is an epidemiological study of 2800 PGR veterans. Symptoms, indices of Chronic Fatigue (CF) and Chemical Sensitivity (CS), and risk factors will be surveyed with mailed questionnaires. Risk factors include demographics, past medical history, psychosocial variables, Gulf War experiences such as prophylactic medication use, occupational and environmental exposures, and pesticide exposures. Symptoms will be clustered to define Gulf War Syndromes. Significant associations between risk factors and these symptom clusters will also be investigated. Subjects identified as CF, CS, or both will be recruited into Projects 2 and 3. In Project 2, healthy veterans will be compared to veterans with CF, CS, and CF concurrent with CS. Veterans will undergo four studies: (1) viral-immunological, (2) psychiatric, psychological, behavioral, and neuropsychological, (3) autonomic dysregulation, and (4) marker of P4501A2 induction resulting from exposure to combusting material. The purpose of Project 3 is to test the autonomic, immunologic, neuropsychologic, and psychologic responses of veterans with CS or CF to two stressors: controlled chemical exposure and exercise. CS subjects will undergo chemical exposures in our Controlled Environment Facility (CEF) to assess their biologic and psychologic response to low-level exposure. CF subjects will undergo a maximal treadmill exercise test. Circadian patterns of catecholamines and axillary temperature, viral burden, and cardiovascular and endocrine reactivity will be measured in response to this physical stressor.

Project 4 is an animal study evaluating the interaction between stress and pathology/physiology when rats are predisposed to disease by exposure to Soman or to Dioxin. Two strains of rats that differ in stress reactivity will be used to determine the interaction of hereditary factors and chemical exposure.

Jamal, G. A., S. Hansen, F. Apartopoulos, and A. Peden. 1996. The "Gulf War syndrome". Is there evidence of dysfunction in the nervous system? J Neurol Neurosurg Psychiatry. 60(4):449-51.

In a pilot study, 14 Gulf War veterans were randomly selected from a large list of those with unexplained illness, to compare the functional integrity of the peripheral and central nervous system with a group of 13 healthy civilian control subjects using predetermined outcome measures. The controls were matched closely for age, sex, handedness, and physical activity. Outcome measures included scoring of symptoms and clinical neurological signs, quantitative sensory testing of heat, cold and vibration sensibilities, motor and sensory nerve conduction studies on upper and lower limbs, needle EMG of distal and proximal muscles and multimodality evoked potential (visual, brainstem, and somatosensory) studies. Three measurements, all related to peripheral nerve function (cold threshold ($P = 0.0002$), sural nerve latency ($P = 0.034$), and median nerve sensory action potential ($P = 0.030$) were abnormal in the veterans compared with the controls. There may be a dysfunction in the veterans but more studies are required to investigate the findings further and to characterise the dysfunction if confirmed.

Bell, I. R., R. R. Bootzin, C. Ritenbaugh, J. K. Wyatt, G. DeGiovanni, T. Kulinovich, J. L. Anthony, T. F. Kuo, S. P. Rider, J. M. Peterson, G. E. Schwartz, and K. A. Johnson. 1996. A polysomnographic study of sleep disturbance in community elderly with self-reported environmental chemical odor intolerance. Biol Psychiatry. 40(2):123-33.

Subjective sleep complaints and food intolerances, especially to milk products, are frequent symptoms of individuals who also report intolerance for low-level odors of various environmental chemicals. The purpose of the present study was to evaluate the objective nature of nocturnal sleep patterns during different diets, using polysomnography in community older adults with self-reported illness from chemical odors. Those high in chemical odor intolerance (n = 15) exhibited significantly lower sleep efficiency (p = .005) and lower rapid-eye- movement (REM) sleep percent (p = .04), with a trend toward longer latency to REM sleep (p = .07), than did those low in chemical intolerance (n = 15), especially on dairy-containing as compared with nondairy (soy) diets. The arousal pattern of the chemical odor intolerant group differed from the polysomnographic features of major depression, classical organophosphate toxicity, and subjective insomnia without objective findings. The findings suggest that community elderly with moderate chemical odor intolerance and minimal sleep complaints exhibit objectively poorer sleep than do their normal peers. Individual differences in underlying brain function may help generate these observations. The data support the need for similar studies in clinical populations with chemical odor intolerance, such as multiple chemical sensitivity patients and perhaps certain veterans with "Persian Gulf Syndrome."

Friedman, A., D. Kaufer, J. Shemer, I. Hendler, H. Soreq, and I. Tur-Kaspa. 1996. Pyridostigmine brain penetration under stress enhances neuronal excitability and induces early immediate transcriptional response . Nat Med. 2(12):1382-5.

Pyridostigmine, a carbamate acetylcholinesterase (AChE) inhibitor, is routinely employed in the treatment of the autoimmune disease myasthenia gravis. Pyridostigmine is also recommended by most Western armies for use as pretreatment under threat of chemical warfare, because of its protective effect against organophosphate poisoning. Because of this drug's quaternary ammonium group, which prevents its penetration through the blood-brain barrier, the symptoms associated with its routine use primarily reflect perturbations in peripheral nervous system

functions. Unexpectedly, under a similar regimen, pyridostigmine administration during the Persian Gulf War resulted in a greater than threefold increase in the frequency of reported central nervous system symptoms. This increase was not due to enhanced absorption (or decreased elimination) of the drug, because the inhibition efficacy of serum butyryl-cholinesterase was not modified. Because previous animal studies have shown stress-induced disruption of the blood-brain barrier, an alternative possibility was that the stress situation associated with war allowed pyridostigmine penetration into the brain. Here we report that after mice were subjected to a forced swim protocol (shown previously to simulate stress), an increase in blood-brain barrier permeability reduced the pyridostigmine dose required to inhibit mouse brain AChE activity by 50% to less than 1/100th of the usual dose. Under these conditions, peripherally administered pyridostigmine increased the brain levels of c-fos oncogene and AChE mRNAs. Moreover, in vitro exposure to pyridostigmine increased both electrical excitability and c-fos mRNA levels in brain slices, demonstrating that the observed changes could be directly induced by pyridostigmine. These findings suggest that peripherally acting drugs administered under stress may reach the brain and affect centrally controlled functions.

Wester, R. C., D. Quan, and H. I. Maibach. 1996. In vitro percutaneous absorption of model compounds glyphosate and malathion from cotton fabric into and through human skin. Food Chem Toxicol. 34(8):731-5.

Chemicals are introduced to fabric at many steps during manufacture and use. Fabrics containing chemicals can cause medical problems such as dermatitis and death. Insecticides impregnated into uniforms worn by "Desert Storm" personnel are implicated in "Gulf War Syndrome'. These chemicals must get from fabric into and through skin to cause toxic effects. The objective of the present study was to determine in vitro percutaneous absorption of model chemicals glyphosate (water soluble) and malathion (relative water insoluble) from cotton fabric into and through human skin. The percutaneous absorption of glyphosate from water solution was 1.42 +/- 0.25% dose. This decreased to 0.74 +/- 0.26% for glyphosate added to cotton sheets and immediately put

onto skin. If the cotton sheets were dried for 1 or 2 days, then applied to skin, absorption was 0.08 +/- 0.02% and 0.08 +/- 0.01% respectively. However, wetting the 2-day dried cotton sheet with water to simulate sweating or wet conditions increased absorption to 0.36 +/- 0.07%. Similar results were found for malathion. Absorption of malathion from aqueous ethanol solution was 8.77 +/- 1.43%. This decreased to 3.92 +/- 0.49%, 0.62 +/- 0.11% and 0.60 +/- 0.14% for 0, 1- and 2-day-treated cotton sheets. However, malathion absorption from 2-day treated/dried cotton sheets increased to 7.34 +/- 0.61% when wetted with aqueous ethanol. These results show that chemicals in fabric (clothing, rug, upholstery, etc.) can transfer from fabric into and through human skin to cause toxic effects.

Wittich, A. C. 1996. Gynecologic evaluation of the first female soldiers enrolled in the Gulf War Comprehensive Clinical Evaluation Program at Tripler Army Medical Center. Mil Med. 161(11):635-7.

Tripler Army Medical Center initiated the Department of Defense's Persian Gulf Illness Comprehensive Clinical Evaluation Program (CCEP) on June 15, 1994. In the first 5 months, 100 patients enrolled in this program. Sixteen (16%) were women who served in the Persian Gulf during Desert Shield/ Desert Storm, and 1 (1%) was the dependent wife of a Gulf War veteran who is experiencing illness that may be related to the Persian Gulf War. All 17 women enrolled in the CCEP were evaluated in the Tripler Army Medical Center Obstetrics and Gynecology Clinic between June 17 and November 10, 1994. Each patient underwent gynecologic history, pelvic exam, Pap smear, and screen for fecal occult blood. Ten patients underwent baseline mammograms and 13 patients underwent urogenital and cervical cultures for aerobic bacteria, chlamydia and herpes simplex. The 1 patient with an abnormal Pap smear underwent cervical and endocervical biopsies and colposcopy (histology demonstrated no dysplasia or neoplasia). Half of the 16 Gulf War veterans experienced gynecologic problems while serving in the Gulf and 43% admitted gynecologic problems since returning in 1991. Of 6 patients who became pregnant after returning, 5 had normal pregnancies and 1 suffered four miscarriages.

Cannon, T., J. K. Neumann, and G. A. Walsh. 1996. Gulf war syndrome and vasodilation [letter]. Mil Med. 161(2):A3.

Pennisi, E. 1996. Chemicals behind Gulf War syndrome? [news]. Science. 272(5261):479-80.

Coker, W. J. 1996. A review of Gulf War illness. J R Nav Med Serv. 82(2):141-6.

Graham, J. T. 1996. Investigating Gulf veterans' health concerns. J R Nav Med Serv. 82(2):113-6.

In order to answer the questions arising from the health concerns of Gulf veterans, the Defence Medical Services have collated relevant health data so that they may be systematically analysed. However, data coverage is limited and there are concerns about its quality. Intramural studies alone will not be robust enough to determine of veterans are experiencing an excess of ill-health so a programme of epidemiological studies will be commissioned in collaboration with the Medical Research Council.

1995

Ficarra, B. J. 1995. Medical mystery: Gulf war syndrome. J Med. 26(1-2):87-94.

Lotti, M., and A. Moretto. 1995. Cholinergic symptoms and Gulf War syndrome [letter; comment]. Nat Med. 1(12):1225-6.

Robinson, A. 1995. Veterans worry that unexplained medical problems a legacy of service during Gulf War. Cmaj. 152(6):944-7.

Some Canadians who served in the military in the Persian Gulf 4 years ago complain of a range of symptoms commonly described as Gulf War syndrome. Although the syndrome is not recognized as a clinical entity, symptoms include fatigue, lack of sleep, depression, cognitive problems, rashes, bone aches, lassitude, lack of motivation, forgetfulness, mood changes irritability and diarrhea. The medical branch of the Department of National Defence has established programs to inform, guide diagnosis and reach out to symptomatic veterans of the Persian Gulf conflict. Civilian physicians who provide similar care to military personnel who participated in the conflict are invited to call the medical branch (613 996-3752) for further information.

1995. Unexplained illness among Persian Gulf War veterans in an Air National Guard Unit: preliminary report--August 1990-March 1995. MMWR Morb Mortal Wkly Rep. 44(23):443-7.

In November 1994, the U.S. Department of Veterans' Affairs (VA), the Department of Defense (DoD), and the Pennsylvania Department of Health requested that CDC investigate a report of unexplained illnesses among members of an Air National Guard (ANG) unit in south-central Pennsylvania (Unit A) who were veterans of the Persian Gulf War (PGW) (August 1990-June 1991). These veterans had been evaluated at a local VA medical center for symptoms that included recurrent rash, diarrhea, and fatigue. A three-stage investigation was planned to 1) verify and characterize signs and symptoms in PGW veterans attending the VA medical center; 2) determine whether the prevalence of symptoms was higher among members of Unit A than among members of other units deployed to the PGW and, if so, whether the increased prevalence

was associated with PGW deployment; and 3) characterize the illness and identify associated risk factors. This report presents preliminary findings from stages 1 and 2 (stage 3 is in progress).

1995. From the Centers for Disease Control and Prevention. Unexplained illness among Persian Gulf War veterans in an Air National Guard Unit: preliminary report--August 1990-March 1995. Jama. 274(1):16-7.

Veggeberg, S. 1995. Unexplained illnesses not unique to Gulf War veterans [news]. Mol Med Today. 1(7):299.

1994

1994. The Persian Gulf experience and health. NIH Technology Assessment Workshop Panel . Jama. 272(5):391-6.

Gavaghan, H. 1994. NIH panel rejects Persian Gulf syndrome [news]. Nature. 369(6475):8.

triads...

Triads are classic diagnostic criteria made of 3 main features for many diseases (Mcqe's INDEX can help you find many secrets), here are some of them:

There are 2 Charcot triads:

Charcot's triad of cholangitis:

1. jaundice
2. fever and chills
3. abdominal pain

Charcot's triad of multiple sclerosis:

1. nystagmus
2. intention tremor
3. scanning speech

Virchow's triad of deep venous thrombosis:

1. venous stasis
2. endothelial damage
3. hypercoagulable state

Beck's triad of cardiac tamponade:

1. hypotension
2. muffled heart sounds
3. distended neck veins

Hutchinson's triad of congenital syphilis:

1. keratitis
2. deafness
3. tooth abnormalities

Whipple's triad of insulinoma:

1. hypoglycemic symptoms produced by fasting
2. blood glucose below 50 mg/dL during symptomatic episodes
3. relief of symptoms by intravenous administration of glucose

Wernicke's triad of Wernicke's syndrome:

1. ataxia
2. confusion

3. ophthalmoplegia

Cushing's triad of increased intracranial pressure:

1. bradycardia
2. respiratory irregularity
3. increasing blood pressure

Quincke's triad of hemobilia:

1. jaundice
2. gastrointestinal bleeding

Know the correct management of colonic polyps.

Explanation:

Adenomatous polyps should always be removed and followed up by repeat colonoscopy. Hyperplastic polyps have no neoplastic potential.

Familial polyposis should be managed with annual sigmoidoscopic surveillance after age 12. If patient does not develop poly1ps by age 40 then patient is unlikely to develop familial polyposis thus this high level surveillance can be stopped at that stage.

If polyposis develops, treatment is total colectomy

Sleep apnea is a silent killer. How to recognize it:

Key feature is going to be DAYTIME SOMNOLENCE. As soon as you see anything suggesting this symptom, think sleep apnea

A person does not have to be obese to have it although being obese increases the probability further.

Spouses complain about snoring in sleep apnea patients and falling asleep on the wheel while driving. Other associated symptoms are not feeling refreshed on waking up in the morning and nightmares and cramps in legs. Patient may get hypertension and eventually, as the pulmonary hypertension sets in, patient starts to get right heart failure.

Diagnosis is made by a sleep study (Polysomnography).

Parameters monitored during one include: EKG, EEG, Pulse oximetry, Chest movement, Air flow at the nostril/mouth, gaps between breaths and few others that are not important.

There are chiefly 2 types of sleep apnea.

Obstructive: This is due to a mechanical obstruction to the flow of air in the airways Sleep apnea is a silent killer. How to recognize it:

Key feature is going to be DAYTIME SOMNOLENCE. As soon as you see anything suggesting this symptom, think sleep apnea

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There are chiefly 2 types of sleep apnea.

Obstructive: This is due to a mechanical obstruction to the flow of air in the airways

Central: This is due to the lack of impulse of breathing from the central respiratory center. These patients are typically obese and this is also called the Pickwickian syndrome.

The patient is typically sleepy in the daytime in both types. The obstructive type is associated with snoring and near choking at night.

The central sleep apnea is not associated with this and typically is associated with breathing that resembles Cheyne stokes respirations.

Diagnosis is made using a sleep study overnight.

Treatment typically requires a CPAP (continuous positive airway pressure) machine that blows air at a pressure during sleep.

In central apnea it prevents long periods of apnea and in obstructive type, it helps keep the airway open and unobstructed.

Pacemakers are electrical devices that stimulate the heart and are expected to maintain cardiac rhythm as near normal as possible.

They may be internal or external. An external pacemaker is also called a "Zolle" in the US. Internal pacing can be done using leads that traverse the veins to reach the heart. The leads are expected to be in the right ventricle. Although newer types of pacemakers that are both left and right sided are now in use for conditions such as HOCM.

Pacemakers also can be in combination with a defibrillator in which case they are called PCDs (Pacemaker Cardiovertor Defibrillator).

The commonest scenario where a pacemaker will be useful is bradycardia. Any symptomatic bradycardia where the etiology suggests irreversibility is a good scenario for pacing.

Pacemakers are also used for treating tachy-brady syndrome where the tachy is treated with drugs and the brady that these drugs could cause is prevented by the pacer. For instance - such a patient could be started on either a beta blocker or a calcium channel blocker and concomitantly have a pacer to prevent the possible bradycardia.

Pacers are also used in someone who has a left bundle branch block when the patient has right heart catheterization with a swan or central line. These are temporary pacers. This sis done because the right sided manipulation can block the RBB and thus lead to a complete heart block (3rd degree AV block).

Pacers have certain properties. These are described using designated letters.

VVI is the basic pacemaker mode. The first V tells us that the pacer has a single lead that paces the ventricle. The second V tells us the chamber sensed which in this case is the ventricle and the third letter designates what happens it senses a ventricular beat which in this case is inhibition if

it senses the ventricle beat by itself.

More to be added.

CARDIOLOGY

Recognize and manage patients with acute inferior myocardial infarction and second-degree atrioventricular block.

Explanation:

Pacing is on the minds of people when they see blocks on the EKG associated with MIs. Not all blocks are to be paced. Those that need pacing are Symptomatic blocks, Third degree and Mobitz type 2 blocks associated with ANTERIOR MI. Those associated with Inferior MIs can be observed unless symptomatic. The last part is important because most of us see them paced during our training in the USA.

Do you need the mom's consent to test the BABY for HIV?

Baby must have HIV test

Mr Justice Wilson made his ruling at the High Court in London

A baby at high risk of having HIV will have to be tested for the virus even though her parents

oppose it following a landmark ruling in the High Court.
The move has massive implications for parents' rights to decide what treatments their children should have.

The girl - who cannot be named for legal reasons - is four months old and her mother is HIV positive.

Her parents believe in the effectiveness of alternative medicine and say it has kept the mother healthy so far.

They had said they feared they would lose control over the way the child was treated if the test goes ahead.

But Camden Council said the baby could die if she is also HIV positive and goes untreated, and wants the child to receive the highest standard of medical treatment available.

'Baby's rights come first'

In a High Court ruling on Friday, Mr Justice Wilson said the child would have to have the test.

Criteria for diagnosing SLE

Mnemonic is NIH ROAD MAPS. The first 4 letters are system involvements and the others are individual specific findings. 4 of the criteria being present in the patient fulfil the patient's diagnosis for SLE.

N Neurologic Depression, Mild psychosis, Stroke

I Immunologic LE cell, Anti DS DNA or Anti Sm , False positive VDRL

H Hematologic Anemia, leukopenia, Thrombocytopenia without offending drugs

R Renal Proteinuria >0.5g/day or >3+ on dipstick, cellular casts

O Oral ulcers Mouth or nose (seen by doctor - not just reported by patient)

A ANA In the absence of drugs that can do this e.g. hydralazine/procainamide

D Discoid rash Scaling and follicular plugging. Can cause permanent alopecia and scarring

M Malar rash Butterfly rash on cheeks

A Arthritis Tenderness, swelling or effusion in 2 or more joints (not just pain)

P Photosensitivity

S Serositis Pleuritis/Pericarditis (rub/effusion/EKG of pericarditis)

tetanus prophylaxis

tetanus prophylaxis:--

high risk wound-

>5 years since immunization - give immune globulin and booster

<5 years - no intervention

low risk wound-

>10 years - give booster

<10 years - no intervention

A syndrome of choreoretinitis, retardation, and intracranial calcifications associated with microcephaly, and hepatosplenomegaly with jaundice and rash or purpura suggests the diagnosis of

a. cryptococcal meningitis
b. leptospirosis
c. subacute sclerosing panencephalitis
d. congenital neurosyphilis
e. congenital toxoplasmosis

E

Toxoplasma gondii is an intercellular parasite that affects man and animals. It usually infects asymptomatically, but can cause varieties of disease. Congenital toxoplasmosis classically causes specific syndromes of choreoretinitis, retardation, extracranial calcification associated with microcephaly, hepatosplenomegaly with jaundice and rash or purpura. Subacute sclerosive panencephalitis is a syndrome that occurs in childhood, a result of measles infection, rarely rubella. First symptoms are personality change, intellectual deterioration, development of myoclonal seizures, ataxia, and visual impairment. The diagnosis of genital neurosyphilis is difficult to make since the neonate serum STF, FTA, ABS, and even the CSF, STS may be positive because of passively transferred maternal antibodies and the absence of infection. Newborn's IGM, FTA, ABS with a total IGM of the cord can be measured to aid in diagnosis. Lumbar punctures are performed on all neonates at risk for congenital syphilis. In fungal infections of the central nervous system the usual clinical picture is of chronic meningitis, but intraparenchymal infections may occur with symptoms that resemble bacterial brain abscess. Exuberant inflammatory response fungii will lead to obstruction of CSF pathways and hydrocephalus. A vast majority of cases of fungal meningitis that in this country are caused by

cryptococcus neoformans and coccidioides immitis. Leptospirosis is caused by leptospiro anterrogans and in man may cause several types of CNS disease-aseptic meningitis, encephalitis, myelitis, and optic neuritis. The CSF protein may be over 100 mg per 100 milliliters.

An infant begins to vomit shortly after birth and his abdomen becomes distended. A radiograph of the abdomen shows a "double-bubble" gas shadow.

The infant's problem most likely is

a. congenital megacolon
b. malrotation
c. duodenal atresia
d. esophageal atresia
e. tracheoesophageal fistula

C

Vomiting is the most common presentation of congenital duodenal obstruction in the newborn. Abdominal distension ensues, and a flat plate radiograph of the abdomen shows a classic

"double-bubble" gas shadow above, with an absence of gas in the distal bowel. While a tracheoesophageal fistula, esophageal atresia, and malrotation also cause vomiting, they are not associated with the "double-bubble" radiograph.

The method of choice for initial evaluation of bone involvement in patients with multiple myeloma is.

A - Technetium-99m bone scanning
B - Conventional roentgenograms
C - CT-scanning
D - MRI of the skeleton
E - None of the above

Answer is B. Conventional roentgenograms reveal punched-out lytic lesions of the bone, osteoporosis, or fractures in almost 80% of patients with multiple myeloma at diagnosis. The most commonly affected areas are vertebra, skull, thoracic cage, pelvis and proximal humeri and femora. Rechnetium-99m bone scanning is inferior to conventional x-rays for the detection of lytic lesions and should not be used for this purpose (it is, however, excellent for detection of osteoblastic lesions).
CT scanning and MRI may be helpful in patients who have bone pain but no abnormalities on conventional x-rays (MRI also may have prognostic value). These methods should not be used for initial evaluation.

An elderly male complains of severe muscle weakness in his thigh muscles and proximal arm muscles, although this weakness is mild. He states that his weakness is worse in the morning immediately after getting out of bed and improves during the day.

On physical examination it is apparent that muscle strength increases with repetition of the grip strength test and later diminishes. Which of the following tests should be included in the workup of this patient?

A - Chest X-ray
B - Tensilon test
C - Abdominal CT
D - Colonoscopy
E – Cystoscopy

Answer is A. Symptoms in this man are consistent with Eaton-Lambert syndrome. This syndrome shares the same pathologic site with myasthenia gravis (the neuromuscular junction) and has a similar path physiology (an autoimmune disease). Eaton-Lambert syndrome is usually associated with malignancy. Up to 70% of these patients have associated small cell lung cancer, and this disease must be ruled out in every patient with presenting symptoms of Eaton-Lambert syndrome. Clinical presentation of the Eaton-Lambert syndrome includes weakness that is typically seen early in the hip girdle, making it difficult for the patient to rise from a chair or to climb the stairs.

Less dramatic is shoulder girdle weakness. Involvement of the bulbar muscles or diplopia is rare, but ptosis is frequently seen. Symptoms are also likely to be more prominent in the morning; autonomic dysfunction may cause erectile dysfunction and dry mouth.
Differentiation from myasthenia gravis may be hard since patients with Eaton-Lambert syndrome have a positive AChR-Ab test in 13% of cases.

A 16-year-old male in good health presents to you for a school physical. His family history reveals that his father died of colon cancer at age 37. Your physical exam reveals a healthy young man with several lipomas on his back and legs and a nodule on his jaw. You should:

a. Suggest colonoscopy at age 32.
b. Suggest colonoscopy now.
c. Suggest flexible sigmoidoscopy and barium enema at age 32.
d. Suggest flexible sigmoidoscopy and barium enema now.
e. Biopsy his jaw lesion.

Answer is D. Gardner’s Syndrome is similar to familial adenomatous polyposis except that it is associated with benign extra intestinal growths such as lipomas and ostromas. The colonic polyps start to grow in the second decade of life and uniformly deteriorate into colon cancer by the age

of 40. This young man needs a yearly flexible sigmoidoscopy until he shows his first polyps; then he needs a total colectomy.

POLYPOSIS SYNDROMES:

Familial multiple polyposis-- an autosomal dominant syndrome in which the colon contains 100's or 1000's of adenomatous polyps (pedunculated tubular adenomas) which appear in the 2nd/3rd decades. Virtually 100% 0f long-standing cases develop colonic carcinoma(s) and treatment is total colectomy.

Peutz-jeghers syndrome -- hamartomatous polyps of the entire gi tract, especially small intestine, and, mucocutaneous melanosis (lips & buccal mucosa). Polyp contains mucin filled cysts and smooth muscle and has no malignant potential.

Gardners syndrome-- colonic polyposis and desmoid tumors (fibromatosis) and epidermoid cysts (skin), osteoid osteomas (bone), etc. There is a very high risk of colonic carcinoma.

Turcot's syndrome-- colon polyps + brain tumors

Colon Cancer Screening in Patients with Family History Referral Guideline
Diagnosis/Definition
Simple family history: One or more first degree relative(s) with colon cancer (but not meeting criteria for familial syndromes as below); relative must be < age 60 at time of diagnosis.
Familial syndromes:
Familial adenomatous polyposis (=Gardners) defined by appearance of 100-1000 polyps at endoscopy in the index patient. All first degree relatives are considered at risk (autosomal dominant).
Lynch Syndrome Family defined as three relatives with colon CA, involving at least two

generations. One relative must be first degree relative of the other two, and at least one cancer should be diagnosed age <50.

Initial Diagnosis and Management

The family history usually makes the diagnosis in patients at risk.

Ongoing Management and Objectives

When the diagnosis of an at risk patient is made, then periodic referral for colonoscopy according to the schedule below is indicated. No interval testing for occult blood is recommended.

Indications for Specialty Care Referral

Family history of colon CA: Colonoscopy or ACBE/flex-sig every 5 years beginning 10 years younger than youngest affected relative (please include relatives age on consult). Change to average risk screening age 65 if colon always normal.

Familial adenomatous polyposis (=Gardners): Refer patients to GI. First degee relatives: yearly flex-sig ages 10-50.

Lynch Syndrome: First degree relatives: Colonoscopy every two years beginning age 25 (or 5 years younger than youngest affected relative. Colonoscopy should be yearly if adenomas are found.

Criteria for Return to Primary Care

Completion of colonoscopy.

polyps are found throughout the colorectum but Carcinoma occurs in the left side at average age 39!!! polyps are found throughout the colorectum but Carcinoma occurs in the left side at average age 39!!!

An elementary school teacher born in 1964 presents with a high fever, pneumonia, and a rash which was initially urticarial and then became maculopapular with petechial elements. Because measles has been reported in the community, you strongly consider the diagnosis of atypical

measles.

Which one of the following would lend additional support to this diagnosis?

a. The patient has a B-cell immune deficiency disorder
b. The patient received inactivated (formalin-killed) measles vaccine as an infant
c. The measles virus spreads quickly in the school environment via fecal-oral transmission
d. A viral culture of her serum

Answer is B.
This patient has the characteristic features of atypical measles. This illness occurs primarily in individuals who were immunized with the killed measles virus vaccine, which was available from 1963 through 1967. The syndrome of atypical measles presumably represents hypersensitivity in a host who is partially immune. An extremely high measles antibody titer early in the illness is helpful in making the diagnosis, but a viral culture would not be useful. Transmission of measles is primarily via the respiratory tract and associated secretions. Patients with B-cell immunodeficiency are susceptible to recurrent infections with bacterial pathogens. Viral infections are usually not a problem with these patients, although the measles virus does tend to affect the T-cell defense mechanisms.

24 year-old man complains of facial pain, purulent nasal discharge and fever for 4 days.
PE: tenderness over the right maxilla.

1)What is appropriate initial test

a. X ray of sinus
b. CT of sinus
c. Needle aspiration for culture
d. MRI of sinus

2)The most cost effective antibiotic treatment is

a. Amoxicillin-clavulanate
b. Pen G
c. Dicloxacillin
d. Cefaclor
e. Bactrim

1-A. X-Rays. Some experts argue that one x-ray is adequate for diagnosis of maxillary sinusitis. Single x-rays are not useful, however, in diagnosing frontal and sphenoid sinusitis.
computed tomography (CT) scans and magnetic resonance imaging (MRI) are not accurate for an initial diagnosis of acute sinusitis, but they are useful for diagnosing chronic or recurrent acute sinusitis and difficult cases. CT scans are also used by surgeons as a guide during surgery. They show inflammation and swelling and the extent of the infection, including that in deep hidden air chambers missed by x-rays and nasal endoscopy.

2-E. bactrim.

A 15 y/o boy has acne not responded to 5% benzoyl peroxide topically. PE reveals inflammatory papules, and moderate comedonal acne.

The FIRST choice of treatment is

a. 10% benzoyl peroxide plus topical erythromycin
b. oral isotretinoin
c. topical clindamycin
d. topical tretinoin plus oral tetracycline

Answer is D. If no improvement occurs, treatment should be intensified by another antibiotics or oral isotretinoin.
A combination of benzoyl peroxide and topical erythromycin is for mild inflammatory acne, it would not be appropriate for this boy.
Topical clindamycin is used in the management of inflammatory , nonscarring acne.
Oral isotretinoin should be reserved for those in whom conventional therapy with oral antibiotics has proven ineffective. Answer is D. If no improvement occurs, treatment should be intensified by another antibiotics or oral isotretinoin.
A combination of benzoyl peroxide and topical erythromycin is for mild inflammatory acne, it

would not be appropriate for this boy.
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Spleen rupture.

serum glucose and rapid bedside glucose determination, cbc, serum chemistries, amylase, lfts, ua, coagulation studies, blood type and match, abg, blood ethanol, urine drug screens.
Bedside u/s, DPL(for unstable), CT(for stable) and emergent surgeon consult.

Chest x-ray, supine & erect abdomen x-ray
Abdominal sono(er) or abdominal CT

CBC, typing and cross matching, reserved the blood at least 3 pint. BT, PT, aPTT
LFT, Glucose(glucometer), electrolyte, bun, creatine, UA, HIV test, serum amylase,
ABG

Emergency call for surgeon
Vital, Cardiac, and BP monitoring on bed side.
Foley cather and Urine output check.

Ringer's lactate sol I.V before results from Lab.

Hypothyroid case.

orders : cbc for anemia, ua, cxr, esr, ecg, serum
electrolytes(hyponatremia),
tsh which is elevated, t4 which is low, resin t3 or t4 uptake(low) riu :
low s. cholesterol, creatine kinase, LFT: increased, b sugar: hypoglycemia,
antimicrosomal n antithyroglobulin: increased in hashimotos

Management. levothyroxine, rx of anemia, consultn from endocrino thyroid specialist.

A 29-year-old female dancer with no significant medical history comes to your office with several days of urinary frequency, burning, and urgency. In addition, she notes a cloudy discoloration of her urine. She uses no medications, has no allergies, and has not seen a physician for several years.

initial approach??how would you use the history and physical examination to help you localize the infection?

dysuria can occur because of infection at any level.
Temperatures above 102.2oF, nausea, vomiting, chills, and other systemic symptoms are more suggestive of pyelonephritis, although this is not specific. Pyelonephritis characteristically gives back pain and tenderness to palpation at the costovertebral angle. Cystitis often results in suprapubic pain and tenderness. Urethritis can give a urethral discharge that can be clear, white, or yellow. Clinically distinguishing between urethritis and cystitis is difficult

On physical examination this patient had a temperature of (100.4oF) and suprapubic tenderness. There was no back or costovertebral angle tenderness, and there was no discharge noted from the urethra.

Investigations??

urinalysis is the best initial test. Leucocyte esterase test on a dipstick is very sensitive and specific for detecting WBC. THis is quite useful as UTI is rare in the absence of WBC in urine.

Microscopy..A single white cell visible on a high power field is suggestive of infection.

Gram stain... A single bacterium visible on an unspun urine specimen viewed on a high power field correlates to growth on a culture of >100,000 bacteria/milliliter (ml) of urine. A urine culture growing >100,000 bacteria/ml of an organism from voided urine is strongly associated with the diagnosis of UTI. On a catheterized specimen, >100 bacteria per ml is considered positive, and any growth from a percutaneous aspiration of the bladder (suprapubic tap) is considered abnormal.

Imaging studies are not essential in the first infection in adults.

This patient had a urinalysis that was strongly positive for white blood cells and mildly positive for red blood cells and protein. A urine culture was deferred because the patient's income was not sufficient for health insurance, and she wished to defer the cost of a urine culture. Clinclly she was dx as cystitis.

What is the optimal treatment?

This patient is treated with two double-strength, trimethoprim/sulfamethoxazole tablets. She leaves the following morning for a series of dance performances along the eastern coast of the

United States and does not return to her home for 6 weeks. The day following her return she calls your office for an urgent appointment because she has been having fever and dysuria for the past several days as well as nausea and vomiting. In your office you find a very ill-appearing woman with a temperature of 102.9oF with marked costovertebral angle tenderness. What is your assessment of this patient's current diagnosis, and what would you do to evaluate and treat her at this point?

admit the patient to the hospital and obtain a urinalysis, urine culture, and blood cultures.

intravenous antibiotics because of both the severity of symptoms and the nausea and vomiting.

Initially, the choice of antibiotics is largely empiric because a urine culture will take at least 24 hours to yield any growth and an additional 24 hours to speciate the organism and obtain sensitivities. Some guidance can be obtained from Gram stain.

What would be your choice for intravenous antibiotics at this time, and on what do you base the choice?

Initially, the choice of antibiotics is largely empiric because a urine culture will take at least 24 hours to yield any growth and an additional 24 hours to speciate the organism and obtain sensitivities. The choice can be guided somewhat by a knowledge of the most common bacteriology described above as well as a gram stain of the urine. Although it will not give the specific species, a gram stain will allow you to differentiate the gram-negative bacilli such as E. coli and Klebsiella from gram-positive cocci such as enterococcus and S. saprophyticus.

A urinalysis reveals 100 WBCs per HPF, 2+ protein, and 2+ blood. Gram stain of this patient's urine reveals gram-negative rods.

Many agents are active against gram-negative bacilli: third-generation cephalosporins (e.g.,

ceftazidime, cefotaxime, or ceftriaxone), ciprofloxacin, extended spectrum penicillins (e.g., ticarcillin, piperacillin, or mezlocillin), ticarcillin/clavulanate, or aztreonam would all likely be effective. Second-generation cephalosporins would also likely be adequate

The addition of an aminoglycoside in combination with any of the agents listed above is appropriate in those cases where a concomitant bacteremia, a very severe infection, or possibly a resistant organism is suspected.

htn

1. htn + ccf = ace inhibitor
2. htn + DM= ace
3. htn + angina = b blocker
4. old african american = ca channel blocker + diuretics
5. young african american = diuretics
6. htn+ asthama= ca channel blocker
7.HTN += peripheral vascular disease= ca channel blocker

htn + benign prostatic hyperplasia = terazosin, prazosin (alpha-1 rec. antagonists)

htn+ migrain = beta-blocker

htn + osteoporosis = thiazide, bisphosphonate

htn + post AMI = ACEI, beta-blocker, thiazide

htn + atrial fibrillation = verapamil

htn+ hyperthyroidism = beta-blocker

vaginal wet prep
koh mount
vagina; acidity
culture for gc

treatment
trichomonas- flagyl
gardenella- flagyl
candida fluconazole

Tension pmeumothorax

oxygen
abg
needle thoracostomy
chest tube
confirmatory cxr
chem7
keep pt overnight in intensive care and monitor abg
transfer next day to the ward if stable

discahrge after two days or after the removal of the chest tube and put pt on pain killers

schedule appointment after one week

acute asthama

oxygen
pefr
pulse oximetry
abg
albuterol nbi
steroids iv
cxr
chem7

if pco2 becomes normal or increases or pt becomes drowsy
intubate
maintainnance- on albuterol, and sodium cromoglycate and RASt test

if pt found to be allergic – hyposensitisa

Acute asthma.
Diagnose by history and physical examination.

History.

Onset, trigger of current exacerbation.

Severity of symptoms, including limitation of exercise tolerance, interference with sleep.

Medications.

Prior hospitalizations, ER visits, especially recent visits.

Severe exacerbations in past, requiring ICU admissions, intubation.

Any other chronic medical conditions.

Physical examination.

Severity of respiratory compromise: speech difficult because of breathlessness, use of accessory muscles of respiration, inability to lie supine, pulsus paradoxus >12 mm Hg fall in systolic BP during inspiration, tachycardia, tachypnea.

Complications: pneumonia, pneumothorax, pneumomediastinum.

Cyanosis, level of alertness, air movement, wheezing. Wheezing can be an unreliable guide to degree of obstruction; severe obstruction may be associated with a "silent chest" because of little or no air movement.

Beware if patient seems too calm. This may represent CO2 retention and narcosis.

Functional assessment. Monitor PEFR or FEV1. Check pulse oximetry. Infants become hypoxemic earlier than adults do, and physical assessment of respiratory status in children is less reliable. Check O2 saturations on all infants and children by pulse oximetry. Room air saturation should be >93%. A room air saturation <91% in infants usually is predictive of the need for hospitalization. Check an arterial or capillary blood gas level on infants with O2 saturation <90%.

Lab tests.

Do not delay initial treatment waiting for lab tests and radiographs. After initial stabilization, consider:

CBC if patient has fever or purulent sputum.

CXR if suspect complication such as pneumonia or pneumothorax.

Serum theophylline concentration in all patients taking theophylline.

ABG in patients with severe distress, poor response to treatment, or abnormal pulse oximetry.

High-risk patients. Patients at high risk of asthma-related death or life-threatening deterioration.
Prior intubation for asthma, or prior ICU admission.
Two or more hospitalizations for asthma in past year.
Three or more ER visits in past year.
Hospitalization or ER visit in past month.
Using or withdrawing from systemic corticosteroids.
History of syncope or seizure related to hypoxia from asthma.
Poor social situation or psychiatric disease.
Infant <1 year old.
<10% improvement in PEFR or FEV1 in ER.
PEFR or FEV1 <25% predicted.
PCO2 40 mm Hg or more. A normal PCO2 is abnormal in the setting of asthma exacerbations where the patient should be hyperventilating, resulting in a low PCO2. A normal PCO2 may herald impending respiratory failure.

Treatment for asthma or COPD.
Oxygen may be needed to support patient and should not be withheld even to do a blood gas analysis.
Hydration is without benefit if the patient is euvolemic, and aggressive IV hydration may precipitate CHF.
If severe asthma, consider cardiac monitoring.
Beta-agonists are the mainstay of treatment.
Albuterol. 2.5 mg in 3 ml of NS by nebulizer (adults). May give up to 4 treatments per hour.
Some studies suggest that continuously nebulized albuterol works better.
In children, can use albuterol 0.15 to 0.3 mg/kg by nebulizer every hour (ideally divided every 20 minutes or given continuously over 1 hour). The 0.3 mg/kg dosing is significantly better in moderate to severe asthma.
Can use nebulized albuterol almost continuously if needed.

Tachycardia does not increase further after first several doses.

May cause hypokalemia by shifting K1 intracellularly.

Metered-dose inhaler by means of a spacer is just as good as nebulizer if you give about 6 to 8 activations by a spacer to equal one nebulized treatment.

Steroids.

Reduces return visits, admission rates.

Should be used in most patients: always in those already receiving steroids and in most of those previously receiving medications who fail to clear after one nebulizer treatment.

Methylprednisolone. For adults 125 mg IV and 40 mg IV Q6h. For children 1 to 2 mg/kg IV followed by 2 mg/kg/24 hours divided into Q6h doses.

Prenisone. For adults 60 mg PO. For children 0.5 to 2.0 mg/kg Q24h for 3 to 7 days.

All evidence indicates that steroids given orally are just as effective as IV in acute exacerbations of asthma.

There is no need for a steroid taper in those not previously receiving steroids if only 5- to 7-day course. There is no increase in relapse without taper and no adrenal suppression with a 1-week course.

Anticholinergics seem to work better in COPD than asthma but do have some bronchodilating effect.

Atropine 0.4 to 2 mg (adult 0.025 mg/kg) by nebulizer. May mix with beta-agonists in same nebulizer. May increase heart rate and may cause pupils to dilate from contact with mist.

Ipratropium can be used by metered-dose inhaler and is available in a nebulized form. The dose is 0.5 mg by nebulizer. This is preferred over atropine, since there is little systemic effect.

Theophylline-aminophylline. There is little evidence that adding theophylline-aminophylline to maximized beta-adrenergic therapy is helpful in the treatment of acute asthma.

Is arrhythmogenic.

Has a very low therapeutic threshold.

Always check a drug level if you feel compelled to use this drug.

Takes 2 to 3 hours to peak effect after IV administration.

Although frequent, optimal doses of beta-blockers are more effective, if you choose to use aminophylline, it is a 6 mg/kg loading dose to maximum of 350 mg over 30 to 45 minutes

followed by a drip at 0.6 mg/kg/hr not to exceed 50 to 60 mg/hr. Levels should be checked.
Maintenance dose dependent on patient's smoking status, presence of cor pulmonale, and age.
Magnesium sulfate is shown in some studies to produce transient improvement in asthma.
Reasonable if patient has failed conventional therapy; less toxic than theophylline.
Dose: In adults 2 g IV over 15 to 20 minutes (may mix in 50 ml of normal saline). Very safe but do not use in renal failure. May get flushing, transient hypotension but rare.
Magnesium sulfate has been successfully used in children. The dose is 25 mg/kg.
Intubation and nasal CPAP (continuous positive-pressure ventilation) are a last resort and may not work well in the asthmatic patient.
Admit if persistent respiratory distress, O2 saturation <94% after treatment (children), peak expiratory flow of <60% of predicated value in children or failure to increase by 15% above baseline or absolute value of 200 L/min in adults, failure of FEV1 to increase by 500 cc or produce a total of <1.6 liters (adults), hypercapnia (retaining CO2 over baseline value), or pneumothorax. Additionally, clinical judgment is important. If the patient does not look well or still feels dyspneic, consider admission to hospital.

THE PROPER MANAGEMENT OF ABN. PAP SMEARS.

Approach Based on Pap Smear

ASCUS = atypical squamous cells of undertermined significance.
AGCUS = atypical glandular cells of undetermined significance.
LSIL = low-grade squamous intraepithelial lesion (same as CIN I, or cervical intraepithelial neoplasia, grade 1).
Normal. Repeat every year from 18 to 65 years of age. If low risk, may change to every 3 years

after 2 consecutive normals. After 65 years may discontinue after 2 consecutive normals.
No endocervical cells present. Pap test is considered inadequate and should be repeated.
ASCUS secondary to reactive/reparative changes or inflammatory changes. Look for causative agent on wet mount or cultures and treat. If no agent identified, treat with doxycycline 100 mg BID x 7 days. Repeat Pap test in 3 months. If resolved, repeat Pap in 6 months and then yearly. If abnormal at 3 months, do colposcopy.
ASCUS. Repeat Pap smear in 3 months and then every 6 months for 2 years reverting to yearly after having 3 consecutive normals. Colposcopy indicated if follow-up smear indicates ASCUS, or patient not able to comply with every 6 month follow-up exam.
LSIL or CIN I: Proceed to colposcopy.
ASCUS with dysplasia. Colposcopy indicated.
AGCUS. Colposcopy with endocervical curettage.
Other indications for colposcopy. Dysplasia (mild, moderate, severe), squamous cell carcinoma, adenocarcinoma, human papillomavirus infection (cervical or external genitalia), persistent inflammation.

Methods for Treating Cervical Dysplasia
Ectocervical.
Cryotherapy.
Laser therapy.
Topical 5-fluorouracil.
Local excision (biopsy forceps) if entire lesion well visualized.
Endocervical.
Surgical or laser conization.
Loop electrosurgical excision procedure.

unsatisfactory also if:
no endocervical cells present (= no transformation zone present)
no squamous metaplastic cells present (= no endocervical cells)

The new Bethesda System (11/2001) made some changes in reporting (I am not sure if USMLE already aware of this):
In the general categorization:
no more categorization as ASCUS/AGUS!!!
instead: negative for intraepithelial lesion or malignancy (this includes previous regenerative, infectious or repair changes)
or: Epithelial Cell Abnormality
see interpretation/diagnosis
(and then the pathologist will give you a categorization in the Descriptive Interpretation/Diagnoses as to squamous or glandular cell abnormality present or endometrial cells present in a woman>40 yoa etc. see below)
other changes mentioned in descriptive:

NON-NEOPLASTIC:
ORGANISMS:
trichomonas vaginalis
fungal organisms morphologically consistent with Candida spp
shift in vaginal flora suggestive of bacterial vaginosis
bacteria morphologically consistent with Actinomyces spp
cellular changes associated with Herpes simplex virus
OTHER NON-NEOPLASTIC FINDINGS:
Reactive cellular changes associated with
inflammation (includes repair)
radiation
intrauterine contraceptive device (IUD)
benign-appearing glandular cells status post hysterectomy

atrophy

OTHER:
endometrial cells in a woman>40 yoa

EPITHELIAL CELL ABNORMALITIES
SQUAMOUS CELL:
atypical squamous cells
- of undetermined significance (ASC-US)
- cannot exclude HSIL (ASC-H)

low-grade squamous intraepithelial lesion (LSIL)
- encompassing: HPV/mild dysplasia/CIN 1

high grade squamous intraepithelial lesion (HSIL)
- encompassing moderate and severe dysplasia, CIS/CIN 2 and 3
- with features suspicious for invasion (if invasion is suspected)

squamous cell carcinoma

GLANDULAR CELL:
atypical
- endocervical cells
- endometrial cells
- glandular cells

atypical glandular/endocervical cells, favor neoplastic

endocervical adenocarcinoma in situ

adenocarcinoma
- endocervical
- endometrial
- extaruterine
- not otherwise specified (NOS)

OTHER MALIGNANT NEOPLASMS: (specific diagnosis)
EDUCATIONAL NOTES AND RECOMMENDATIONS:

Stress testing in a COPD patient with Claudication

Understand the best method of stress testing in patients with obstructive lung disease and intermittent claudication.

Explanation:

The best stress test in general is exercise stress testing but patients with intermittent claudication cannot exercise adequately. In such patients a chemical stress test needs to be performed.

Dipyridamole stress is preferred over Dobutamine but in a case with obstructive lung disease Dipyridamole may produce bronchospasm whereas Dobutamine would not- therefore Dobutamine stress test would be the test of choice in a patient like this.

A 55-year-old male with no significant past medical history presents to you because of pain and swelling in his right calf following a vigorous game of basketball. He denies any chest pain or shortness of breath. He smokes a pack of cigarettes per day and drinks socially. Physical exam is normal except for edema and tenderness of his right calf. Pulses are intact. A complete blood count, prothrombin time, and PTT are normal. Ultrasonography shows a deep venous thrombosis (DVT) involving the calf and popliteal veins on the right. An appropriate regimen of outpatient treatment for DVT would include:

A -Low molecular weight heparin 30 mg subcutaneously every 12 hrs plus warfarin 10 mg started immediately
B -Warfarin 15 mg started immediately
C -Low dose heparin (5000 units every 12 hrs subcutaneously) plus warfarin 15 mg stat
D -Low molecular weight heparin 60 mg subcutaneously every 12 hrs plus warfarin 5-10 mg started that evening
E -Aspirin 325 mg and warfarin 10 mg both administered immediately

Answer id D.Low molecular weight heparin (Enoxaparin) has been repeatedly shown to be safe and effective for treatment of patients with DVT. Enoxaparin 1mg/kg every 12 hrs and Dalteparin 200U/kg daily have been used in clinical trials. Subcutaneous Heparin in prophylactic doses would be insufficient to prevent a recurrent thrombosis in this patient. Aspirin has not been shown to be effective in DVT.

A 56-year-old man was seen 3 weeks after acute myocardial infarction. He is complaining of shortness of breath and exertion intolerance. He was found to become tachycardic on 30-foot walk (110 min) and his blood pressure in rest was 98/56 mmHg. The following ECG was obtained(shows st elevation in anterior leads). Which of the following diagnostic methods is the

most suitable to establish a diagnosis in this patient?

A - Cardiac catheterization
B - Exercise stress test
C - Radionuclide ventriculography
D - Thallium stress test
E – Echocardiography

Answer is E. ST segment elevation does not resolve completely during the acute phase of MI. This most commonly occurs with anterior infarcts. The features seen on this ECG are associated with the development of a ventricular aneurysm. Marked aneurysm dilatation may preclude effective systolic emptying of the left ventricle by expanding with the increase in intraventricular pressure during the systole. This leads to diminished stroke volume, cardiac output, pulmonary congestion, exercise intolerance, etc.
Confirmation of the diagnosis is most effectively made by echocardiography. Radionuclide ventriculography, Thallium imaging, and cardiac catheterization also have the ability to demonstrate aneurysms, but these methods are slower and more invasive; ventriculography and Thallium imaging may only be able to detect large abnormalities.

A 34-year-old female was found to have a single 2 cm thyroid nodule. Which of the following is the method of choice to differentiate between malignant or benign disease?

A - Tc99m thyroid scan
B - Ultrasound examination of the nodule and surrounding thyroid tissue
C - MRI scan of the thyroid gland
D - Fine-needle aspiration biopsy
E - Excision biopsy of the nodule

The correct answer is D: Fine-needle aspiration biopsy
Educational objective: Review appropriate diagnostic procedures for thyroid nodule evaluation.
Fine-needle aspiration biopsy of a thyroid nodule has proved to be the best method for differentiation of benign from malignant thyroid disease. It is performed as an outpatient procedure and requires no preparation. A No. 25 - 1.5-inch needle is inserted into the nodule and moved in and out until a small amount of bloody material is seen in the hub of the needle. The needle is then removed, and the content of the needle is expressed onto the clean slide. A thin smear is prepared using another clean glass slide.
The slides are fixed and stained (Wright’s, Geimsa’s or Papanicolau’s stain). The sensitivity of the technique is about 95%, and specificity also about 95%. For best results this method requires adequate tissue sample and a trained cytologist to interpret it.

FNA biopsy can't identify well-diff Follicular CA.
You have asked about the best test, not the initial one.
Please clarify.

Thyroid fine needle aspiration (FNA) biopsy is the only non-surgical method which can differentiate malignant and benign nodules in most, but not all, cases. The needle is placed into the nodule several times and cells are aspirated into a syringe. The cells are placed on a microscope slide, stained, and examined by a pathologist. The nodule is then classified as nondiagnostic, benign, suspicious or malignant.

Nondiagnostic indicates that there are an insufficient number of thyroid cells in the aspirate and no diagnosis is possible. A nondiagnostic aspirate should be repeated, as a diagnostic aspirate will be obtained approximately 50 percent of the time when the aspirate is repeated. Overall, five to 10 percent of biopsies are nondiagnostic, and the patient should then undergo either an ultrasound or a thyroid scan for further evaluation.

Benign thyroid aspirations are the most common (as we would suspect since most nodules are benign) and consist of benign follicular epithelium with a variable amount of thyroid hormone protein (colloid).

Malignant thyroid aspirations can diagnose the following thyroid cancer types: papillary, follicular variant of papillary, medullary, anaplastic, thyroid lymphoma, and metastases to the thyroid. Follicular carcinoma and Hurthle cell carcinoma cannot be diagnosed by FNA biopsy. This is an important point. Since benign follicular adenomas cannot be differentiated from follicular cancer (~12% of all thyroid cancers) these patients often end up needing a formal surgical biopsy, which usually entails removal of the thyroid lobe which harbors the nodule.

Suspicious cytologies make up approximately 10 percent of FNA's. The thyroid cells on these aspirates are neither clearly benign nor malignant. Twenty five percent of suspicious lesions are found to be malignant when these patients undergo thyroid surgery. These are usually follicular

or Hurthle cell cancers. Therefore, surgery is recommended for the treatment of thyroid nodules from which a suspicious aspiration has been obtained.

FNA is the first, and in the vast majority of cases, the only test required for the evaluation of a solitary thyroid nodule. (A TSH value should also be obtained to evaluate thyroid function.) Thyroid ultrasound and thyroid scans are usually not required for evaluation of a solitary thyroid nodule. FNA has reduced the cost for evaluation and treatment of thyroid nodules, and has improved yield of cancer found at thyroid surgery. Although a solitary thyroid nodule can enlarge or shrink over time, the natural history of solitary nodules reveals that most nodules change little with time.

A 69-year-old female suffered cardiac arrest in the emergency room. After prolonged cardiopulmonary resuscitation, spontaneous heartbeat was achieved. However, she remained unresponsive. Seven days later she is still unresponsive, and it has been assessed that her condition is not reversible.

She had completed an advance directive about her health care several years ago. In this document she appointed her husband to have durable power of attorney for health care and specified that she did not want her life to be maintained by artificial means for longer than 1 week. She also specified that she prefered to be allowed to die even if this meant cessation of nutritional support, ventilation, and hydration. However, her husband now requests that her care continue unchanged with full hydration, parenteral nutrition and ventilatory support.

Which of the following is the appropriate action to be taken?

A - Wishes of the husband should be followed since he has durable power of attorney for health care.
B - Ventilatory support, hydration, and nutritional support should be stopped at this point according to patient’s wishes.
C - Because of conflict, only the hospital ethical committee can make the decision.
D - Care for patient should be transferred to other physician who is willing to comply with patient’s wishes.
E - Current level of care should be maintained until court decision is obtained regarding further actions.

Answer is B. Patient in this question has executed durable power of attorney for health care. This power is delegated to her husband and his wishes should be followed – as long as those wishes are not contrary to the wishes of the patient. Since this patient specified in her advance directive that she dose not want to be maintained beyond one week by means of ventilation, artificial nutrition and hydration, those measures should be stopped. Transferring patient to another physician’s care does not change the situation in any way. Invoking the hospital's ethical committee may help the physician deal with the situation but should not change the outcome. There is no need for a court decision in this case since patient has explicitly stated her wishes in advance directive form.

A 69-year-old man who is seen for routine yearly check-up, and who has no medical complaints, inquires about aspirin use. He was told by a friend who is a physician that everybody should take one aspirin a day so he started taking one 325 mg aspirin a day several weeks ago. He is not taking any other medications.

His physical examination is completely normal. His lipid panel is within normal limits as well as his electrolyte panel and complete blood count. His blood pressure is 127/67, temperature 36.8ºC, weight 72 kg, and height 182 cm.

He asks what you recommend about aspirin use. Which of the following is the answer that is in accordance with available data at this time?

A - He should continue to take aspirin as he started since this therapy indeed leads to reduction in the incidence of cardiovascular incidents.
B - He should continue to take aspirin, but should take 81 mg a day since it has been shown that this dose has a much lower incidence of side effects.
C - He should stop taking aspirin because of the resulting high incidence of gastrointestinal bleeding in this age group.
D - He should continue to take aspirin until he is 80 years old, and than he should stop because there is no further benefit after this age.
E - He may continue to take aspirin, but should stop if symptoms of gastrointestinal distress occur or he notices blood in the stool (or melena). However, there is no data to prove benefit of this therapy in asymptomatic individuals.

Answer is E. Aspirin is effective in preventing stroke in those patients who have transitory ischemic attacks and also in prevention of nonfatal myocardial infarction and cardiovascular mortality in those with prior myocardial infarction and unstable angina. Some physicians believe that anybody should take daily aspirin as a means of prevention of cardiovascular morbidity and

mortality, even those without any evidence of disease.
There are two trials that examined this issue. The U.S. trial was conducted on physicians and showed a significant decrease in fatal and nonfatal myocardial infarction, but not in total cardiovascular mortality. The other study was conducted in Great Britain and showed no difference (sample size was smaller than that of U.S. study). Both studies found somewhat increased incidence of stroke in those taking aspirin, but the difference was not statistically significant.
The U.S. Preventive Service Task Force does not recommend for or against aspirin use in primary prevention of myocardial infarction in asymptomatic men or women. Those with multiple risk factors but no signs or symptoms of cardiovascular disease should be counseled about benefits and risks of daily aspirin therapy (cerebral and gastrointestinal hemorrhage, gastrointestinal distress). Patients with existing coronary artery disease or transient ischemic attack or previous stroke are candidates for therapy if there are no contraindications.

Eleven days after a massive stroke, patient does not have spontaneous respirations or response to any stimuli. Neurologic evaluation indicates that he is unlikely to regain consciousness. He has appointed his common law spouse to make the decisions about his health care by means of a living will in which he indicated that he does not want his life to be maintained using futile medical care. This was executed one and a half years ago while they lived in another state.

Patient’s spouse has requested that his hydration and nutritional support be withdrawn. The doctor treating the patient has strong moral convictions against terminating any kind of life support.

In this situation which of the following scenarios would be appropriate for the physician to follow?

A - He should continue to treat the patient according to his convictions since he is not obligated to practice medicine contrary to his moral beliefs.
B - He should comply with the requests of the patient's spouse.
C - He can safely continue to treat patients as he wishes because the living will of the patient was executed in another state and it was done so more than 1 year ago, both of which make it invalid in the present situation.
D - He should transfer the care of the patient to another physician who is willing to comply with the wishes of the patient's wife and his own expressed in the living will.
E - He cannot make this decision on his own and needs to consult the hospital ethics committee.

Answer is D. Educational objective: Emphasize the rights of physicians when confronted with morally unacceptable situations.
According to the Patient Self-determination Act, physicians are obligated to comply with REASONABLE requests of competent patients or their appointed agents (most commonly by the durable power of attorney for health care or by the living will). There is no time limit to the validity of such appointment, and advance directive executed in one state is valid in all others.
If, despite all other conditions being met, the physician still has moral disagreement with the decisions being made he is obligated to transfer the care of the patient to a physician who is ready to comply with those decisions.
A hospital ethics committee may be useful in providing a physician with counseling but it is not necessary in this situation.

A 76-year-old man is hospitalized with stroke in the area of the right middle cerebral artery. He had a paroxysm of cough immediately after attempt to eat.

On physical examination he is alert and oriented to time, place, and person. He has severe dysarthria but no signs of aphasia. He has facial asymmetry due to left-sided facial droop, but his gag reflex is intact.

Which of the following is the most appropriate way to provide nutrition to this patient?

A - Placement of a percutaneous gastrostomy tube
B - Intravenous alimentation
C - Feeding through a nasogastric tube
D - Oral feeding supervised by a nurse and suctioning as needed
E - Clear liquid diet with advanced diet as soon as possible depending on patient's clinical status

Answer is B. After a stroke about 25-45% of all patients develop dysphagia. The main problem that stems from dysphagia is aspiration pneumonia, which, if it develops, greatly complicates the clinical course and contributes to mortality. The patient in question had an attack of cough after an attempt to eat. This is a common sign of dysphagia. Physical examination of this patient revealed several findings that suggest dysphagia (facial nerve paresis and dysarthria). It is a common misconception that presence or absence of a gag reflex correlates with the risk of aspiration. This is not true. More important in the assessment of the aspiration risk are speech articulation, ability to swallow, and tongue movement. This patient has enough signs and symptoms to justify formal swallowing evaluation prior to beginning oral intake.
Many patients with dysphagia aspirate silently, without coughing or choking. Nurse's supervision

during the feeding may not ensure that successful suction will be possible if patient aspirates while eating.
Dysphagia after stroke commonly improves. Hence, a permanent form of enteral feeding, such as a gastrostomy tube, is not necessary.
Modification of the diet structure (giving clear liquid diet, etc.) may be a part of the dysphagia management in some circumstances, but liquids have the greatest potential for aspiration.
A nasogastric tube also may be used in certain circumstances, but it carries the risk of paranasal sinus infection as well as aspiration of regurgitated gastric content or leaked gastric content from a malpositioned tube.

A 91-year-old male suffered a massive hemorrhagic stroke. He has been treated in the intensive care unit. He required intubation and ventilation. His heart rate has been irregular; blood pressure dropped during the first 12 hours of treatment to less than 80 systolic. Blood pressure has been maintained for the last 6 hours with a maximal dose of the dopamine.

His two sons arrived in the hospital from the other part of the country. Both are very distressed. They have not seen their father for more than 4 years and plans were being made to have a family reunion in a couple of months. Patient's wife of the last 2 years is also in the hospital. She holds a durable power of attorney for health care for the patient and states that his wish would be to stop these aggressive measures of life support.

Patient's sons strongly disagree and wish to continue life support as long as possible. Which of the following is appropriate action to be undertaken?

A - Since there is disagreement about future care and patient cannot express his wishes, it is

necessary to organize an extended family conference and try to reach consensus on future care.
B - The wishes of the sons should be followed because they may sue the hospital if care is stopped.
C - The wishes of the sons should be followed because stopping the care equals euthanasia.
D - The wife’s instructions should be followed since she holds a power of attorney for the health care of this patient.
E - Life support should be continued until brain death can be established, at which point care should be stopped because this avoids any legal issues in the case

Answer is D. A durable power of attorney for health care which takes written form is authorized by statute in practically every state. It enables a decisional person to appoint someone else (the agent) to make future medical treatment choices for him or her in the event of decisional incapacity. The agent may or may not be a family member. A durable power of attorney, unlike a living will, supplies an actual person who is available when decisions must be made and who is authorized to advocate for and interpret the expressed and inferred whishes of the patient. The availability of such an agent is advantageous both to the patient who needs advocacy and the physician who is trying to act according to the wishes of the incapacitated patient.
In this case the patient’s wife acts as the patient’s agent, and her instructions take precedence over all other wishes of the family members.

A patient with cytomegalovirus retinitis has been treated with intravenous ganciclovir for the last 4 months. On the most recent laboratory findings a sudden drop in the thrombocyte count was noted (20,000 mm3). Which of the following is the most appropriate action in this situation?

A - Discontinuation of the therapy
B - Exchange of ganciclovir with intravenous foscarnet
C - Exchange of ganciclovir with acyclovir
D - Exchange of ganciclovir with valcyclovir
E - Continuation of ganciclovir therapy

Answer is B. The major drugs that are used for treatment of cytomegalovirus retinitis are intravenous ganciclovir and foscarnet, oral ganciclovir, intraocular ganciclovir, and intravenous cidofovir. Ganciclovir and foscarnet have equivalent efficacy against the retinitis. Major side effects of the ganciclovir are neutropenia and thrombocytopenia (limiting use in up to 16% of patients). Ganciclovir should not be given with absolute neutropenia of less than 500 mm3 and thrombocytopenia 25, 000 mm3.
Foscarnet increases serum creatinine concentration (due to acute tubular necrosis) and may produce symptoms of hypocalcemia during drug infusion because of chelation of serum ionized calcium (and magnesium). These side effects have been dose-limiting in up to 20% of patients.

A 53-year-old male smoker presented with a 2-week history of expectorating sputum streaked with a blood. He denies any fever or chills or increases in the intensity of his cough. Physical examination and chest X-ray are unremarkable. Which of the following is an appropriate next step in the diagnostic work-up of this patient?

A - Fiberoptic bronchoscopy
B - MRI of the chest
C - High resolution CT of the chest
D - A and B
E - A and C

Answer is E. Fiberoptic bronchoscopy and high resolution CT (HRCT) are, in many ways, complementary to each other. Both of those procedures have advantages in certain clinical situations. In one study HRCT demonstrated all tumors seen on bronchoscopy as well as several which were beyond bronchoscopic range. On the other hand, HRCT could not detect bronchitis or subtle mucosal abnormalities that could be seen on bronchoscopy. In one study HRCT was particularly useful in diagnosing bronchiectasis and aspergillomas, while bronchoscopy was diagnostic of bronchitis and mucosal lesions such as Kaposi’s sarcoma. The patient in question is at high risk for pulmonary carcinoma; as of today, the procedures are considered complementary in this setting.

A 42-year-old female presented with pain in the left leg. Pain was mild, dull but constant. On examination there was a difference in the circumference of the calves, with the left leg being 2.5 cm (1.0 inch) bigger. There was also a 1.5 cm increased circumference in the left thigh area. Palpation of the left calf revealed tenderness on palpation in popliteal fossa and half way down the posterior aspect of the calf. This was the first such episode in her life. Her past medical history was significant only for multiple (3) spontaneous abortions. Impedance pletismography confirmed deep venous thrombosis. Which of the following findings is most likely in the laboratory results of this patient?

A - Polycytemia
B - Thrombocytopenia
C - Low white blood cell count
D - Hyponatremia
E – Hyperkalemia

Answer is B. This patient presents with confirmed deep venous thrombosis and remarkable history of the spontaneous abortions. This constellation of symptoms and signs is highly

suggestive of antiphospholipid antibody syndrome (antibodies directed against either phospholipids or plasma proteins bound to anionic phospholipids. Most common symptoms are venous and arterial thrombosis, recurrent fetal losses, and thrombocytopenia. Other possible findings include livedo reticularis, migraine headaches, Raynaud's disease, hemolytic anemia, neurologic dysfunction, renal disease, pulmonary hypertension, avascular necrosis, and adrenal insufficiency.
In rare cases, primary antiphospholipid syndrome may result in multiorgan failure because of multiple vessel occlusions.

A 55-year-old man comes to your office for evaluation of abnormal hemoglobin of 17.8 g/dl and dyspnea. Three years ago he underwent uvuloplasty because of snoring and had complete relief of his symptoms. He quit smoking 5 years ago and is a social drinker.

On physical exam he is 175 centimeters tall, weighs 70 kg and his blood pressure is 124/86 mm/Hg. Examination of the abdomen reveals an enlarged spleen.

Laboratory studies are as follows:

Hb - 17.8 g/dl, MCV – 85 fL
WBC – 13, 000 microliter
Platelet count – 500, 000
O2 saturation - 96%
PH - 7.42, PCO2 - 40, PO2 - 88
Venous blood P50 - 27 mm/Hg

Erythropoietin - 2 mU/ml
RBC mass - Increased

What is the most likely diagnosis?

A - Sleep apnea
B - Renal cell carcinoma
C - COPD
D - Hemoglobinopathy
E - Polycythemia rubra vera

E

Criteria for diagnosing polycythemia rubra vera include:
Category A - increased red blood cell (RBC) mass,
splenomegaly and normal oxygen saturation.
Category B - platelet count more than
400,000/microliter, white blood cell count (WBC)
more than 12,000 /microliter, leukocyte alkaline
phosphatase score more than 100. Serum level of
vitamin B12 more than 900 ng/L.
The presence of all three criteria in category A establishes the diagnosis. If the patient has increased RBC mass with either of the other two category A criteria, then 2 of the 4 category B criteria are necessary to establish the diagnosis.

Erythropoietin levels are elevated in patients with secondary polycytemia seen in the other conditions listed

Will somebody answer the CCS presented below..Thanks

1. Myocardial infarction
2. Hypothyroidism
3. Renal cell mass, most likely Renal cell carcinoma
4. Acute pulmonary edema
5. Diabetes mellitus type 2
6. Neonatal hyperbilirubinemia secondary to cephalohematoma reabsorption
7. Opioid overdose
8. Major depression
9. Ovarian torsion

A 16-year-old female presents to a family physician to obtain a referral for family therapy. She is estranged from her mother and stepfather, who see the same physician. For many years, this patient responsibly cared for her four younger siblings while their single mother worked. Since her mother's marriage, the family has become involved in a fundamentalist church. The patient moved out when she felt the social and moral restrictions of the family's religion were too burdensome for her. The patient seemed quite mature; she maintained a 3.5 GPA, along with a part-time job. She demonstrated a genuine desire for reconciliation, and the therapy referral was

provided.
She also requested and obtained a prescription for contraceptives during the visit, with the assurance that her sexual activity would be kept confidential. In follow-up, she reported that the therapist had informed her that if she mentioned anything about being sexually active with her adult partner, he would be obliged to report her to the state. The patient was very concerned about the conflict between this statement and the family physician's prior assurance of confidentiality.

Should this patient's confidentiality be broken?

No

While the physician has a moral obligation to obey the law, he must balance this against his responsibility to the patient. In researching the Criminal Code of Washington, the physician learned that sexual intercourse with a minor, at least 16, but under 18, is a class C felony, and a reportable offense, if the offender is at least 90 months older than the victim. This patient's relationship did not actually meet the criteria for mandatory reporting. Had this not been the case however, the physician could be justified in weighing the balance of harms arising from the filing of such a report.
There is little justification for informing the family of the young woman's sexual activity. Due to the family's strong fundamentalist beliefs, significant damage would have occurred in the family reconciliation process with this discovery. Although they would clearly disapprove of the patient's actions, her choices carry no risk of harm to them.
Criteria for diagnosing polycythemia rubra vera include

Your patient with cryptococcal meningitis eventually agrees to be tested for HIV and her test comes back positive. Due to her opportunistic infection she receives the diagnosis of AIDS. Should she be reported to the department of public health?

Yes

AIDS is a currently a reportable diagnosis in all 50 states of the union. Her diagnosis should be reported to the department of public health. Notably, HIV positivity without the diagnosis of AIDS is not reportable in all states. Currently, 30 of 50 states requires reporting of a positive test. It is important to find out the local states laws where you are practicing to know how to approach this problem.

A 22-year-old woman is admitted to the hospital with a headache, stiff neck and photophobia but an intact mental status. Lab test reveal cryptococcal meningitis, an infection commonly associated with HIV infection. When given the diagnosis, she adamantly refuses to be tested for HIV.
Should she be tested anyway by the medical staff?

No

Testing for HIV, as for any other medical procedure should be done only with the informed consent of the patient. Testing without consent is unethical in this setting. The physician's role in the care of this patient is ongoing support, education and guidance about her various options for care.

A 55-year-old man has a 3-month history of chest pain and fainting spells. You feel his symptoms merit cardiac catheterization. You explain the risks and potential benefits to him, and include your assessment of his likely prognosis without the intervention. He is able to demonstrate that he understands all of this, but refuses the intervention.
Can he do that, legally? Should you leave it at that?

Yes

This patient understands what is at stake with his treatment refusal. As he is competent to make this decision, you have a duty to respect his choice. However, you should also be sure to explore his reasons for refusing treatment and continue to discuss your recommendations. A treatment refusal should be honored, but it should also not be treated as the end of a discussion.

A 64-year-old woman with MS is hospitalized. The team feels she may need to be placed on a feeding tube soon to assure adequate nourishment. They ask the patient about this in the morning and she agrees. However, in the evening (before the tube has been placed), the patient becomes disoriented and seems confused about her decision to have the feeding tube placed. She tells the team she doesn't want it in. They revisit the question in the morning, when the patient is again lucid. Unable to recall her state of mind from the previous evening, the patient again agrees to the procedure.
Is this patient competent to decide? Which preference should be honored?

This patient's underlying disease is impairing her decision making capacity. If her wishes are consistent during her lucid periods, this choice may be considered her real preference and followed accordingly. However, as her decision making capacity is questionable, getting a surrogate decision maker involved can help determine what her real wishes are This patient's underlying disease is impairing her decision making capacity. If her wishes are consistent during her lucid periods, this choice may be considered her real preference and followed accordingly. However, as her decision making capacity is questionable, getting a surrogate decision maker involved can help determine what her real wishes are

A 3-year-old child is brought to your clinic with a fever and stiff neck. You are quite certain the child has meningitis. When you discuss the need for a spinal tap and antibiotic treatment, the

parents refuse permission, saying, " We'd prefer to take him home and have our minister pray over him."
Can the parents refuse treatment in this case? How should you handle this?

The physician has a duty to provide treatment to a child when denying that treatment would pose a significant risk of substantial harm. Failure to diagnose and treat bacterial meningitis would seriously threaten the health and even life of this child. The physician should share his view with the family and seek to elicit their cooperation through respectful discussion. Inviting their religious leader to the hospital while also providing standard medical therapy may prove to be an acceptable compromise. Should these efforts not result in parental permission, the physician is justified in seeking legal help so as to proceed with the procedure and treatment of the child. In most states a physician is legally authorized to provide emergency treatment to a child without a court order when delay would likely result in harm.

A mother brings her 18-month-old daughter to your office for a routine physical examination. The child has had no immunizations. Her mother says that they believe in naturopathic medicine

and prefer not to immunize their children.
What is your role in this situation? Can parents refuse to immunize their children?

Yes

The risk faced by unimmunized individuals is relatively low, and the mother's refusal to immunize does not pose a significant likelihood of harm to her child. The physician should be sure that the child's mother understands the risks of remaining unimmunized and attempt to correct any misconceptions about the degree of risk associated with getting immunized. If the mother persists in her request, the physician should respect her wishes.

Can parents refuse to provide their children with necessary medical treatment on the basis of their beliefs?

Parents have legal and moral authority to make health care decisions for their children, as long as those decisions do not pose a serious threat to the child's physical well-being. Parents should not be permitted to deny their children medical care when that medical care is likely to prevent substantial harm or suffering. If necessary, the physician may need to pursue a court order in order to provide treatment against the wishes of the parents. Nevertheless, the physician must always take care to show respect for the family's beliefs and a willingness to discuss reasonable alternatives with the family.

What kinds of treatment can parents choose not to provide to their children?
Parents have the right to refuse medical treatments when doing so does not place the child at significant risk of substantial harm or suffering. For example, parents have the right to refuse immunizations for their children on religious or cultural grounds.

Ref. ETHICS IN MEDICINE University of Washington School of Medicine

A 13-year-old white male complains of a 2-month history of pain in the anterior aspect of the right knee and mild intermittent swelling of the knee. Although he plays soccer and runs track, he cannot recall any singular traumatic event. He has noticed that the pain is worse after running or going up or down stairs. He has not noticed any locking, clicking, or giving way. Physical examination shows mild thickening of the patellar tendon and tenderness at the insertion of the patellar tendon. There is no effusion or instability.

Which one of the following is true regarding this patient's condition?

a. Radiographic findings of a fragmented epiphysis are characteristic
b. A CBC and sedimentation rate should be obtained to rule out inflammatory disorders
c. The problem is usually self-limited and generally responds to a brief period of activity restriction
d. The problem is caused by avascular necrosis of the tibial tubercle

e. A bone scan is indicated at this point to confirm the diagnosis and rule out inflammatory and neoplastic conditions

C

Osgood-Schlatter disease is a generally self-limited condition characterized by tenderness and swelling of the patellar tendon and by excessive enlargement of the proximal tibial tubercle. It is a disease of pre-adolescence, commonly seen between the ages of 11 and 15 in boys and 8 and 13 in girls. It is more common in boys. There is usually a history of participation in sports and a recent growth spurt, and the problem is unilateral in three-fourths of patients. It is caused by a contracted quadriceps mechanism producing traumatic stress on the proximal tibial tuberosity during the growth period, when the tibial tubercle is susceptible to strain. There is no avascular necrosis. The pain is usually worse after activities that stress the patellofemoral unit, such as running or climbing stairs. It is a clinical diagnosis, and requires no confirmatory testing in the usual mild to moderate cases. Roentgenographic findings are variable and are not required to make the diagnosis. It usually responds to activity restrictions, although severe cases may require a temporary period of cast immobilization.

A 2-year-old Hispanic female visiting from Mexico presents with a 1-week history of repeated episodes of severe coughing. Her mother reports that a runny nose and "cold" preceded the onset of the cough. The mother notes that the family with whom they are staying has a dog who recently contracted "kennel cough." The child is currently afebrile and appears mildly ill; her lungs are clear. When coughing, she is clearly uncomfortable and vomits a small amount of mucus.

Your management would include which one of the following?

a. Administration of immune serum globulin intramuscularly

b. Having the dog treated by a veterinarian to avoid spread of this infection to other persons in the home

c. Oral erythromycin therapy for 2 weeks

d. Reassurance that the cough will abate over the next week

e. Hospitalization for ribavirin (Virazole) aerosol therapy

C

This child's presentation is highly suspicious for pertussis, given the severe coughing paroxysms and possibility of inadequate immunization. Two weeks of oral erythromycin is recommended for mildly to moderately ill children, principally to halt the spread of the illness. Ribavirin is used for respiratory syncytial virus infection, generally seen in much younger children and with more respiratory distress. The cough of pertussis often lasts several weeks. Although "kennel cough" is produced by a canine Bordetella species, B. pertussis is seen only in humans. Immune globulin is not recommended

HIV patient does not want to tell wife - Can you?

Yes. There is a risk to somebody,s life in this case. The human benefit of breaching confidentiality in this case is much more than not breaching it. Even if the patient says that he will tell his wife, you must confirm that this is done. If he does not do it, you must ensure that she is informed (even if this involves the health department/police contacting her if you cannot manage so yourself).

This comes from the fact that confidentiality need not be maintained if there is danger to somebody's life.

The following information is posted from the NY state regulations of reporting to partners:

"Notifying Partners:

If you test HIV positive, your provider will talk with you about the importance and benefits of notifying your partners of their possible exposure to HIV. It is important that your partners know they may have been exposed to HIV so they can find out whether they are infected and benefit from early diagnosis and treatment. Your provider may ask you to provide the names of your partners, and whether it is safe for you if they are notified. If you have been in an abusive relationship with one of these partners, it is important to share information with your provider.

For information regarding services related to domestic violence, call 1-800-942-6906.

o Under state law, your provider is required to report to the health department the names of any

of your partners (present and past sexual partners, including spouses, and needle sharing partners) whom they know.

o If you have additional partners whom your provider does not know, you may give their names to your provider so they can be notified.

o Several options are available to assist you and your provider in notifying partners. If you or your provider do not have a plan to notify your partners, the health department may notify them without revealing your identity. If this notification presents a risk of harm to you, the Health Department may defer the notification for a period of time sufficient to allow you to access domestic violence prevention services.

o If you do not name any partners to your provider or if a need exists to confirm information about your partners, the health department may contact you to request your cooperation in this process.

Because the patient's wife is at serious risk for being infected with HIV, you have a duty to ensure thatshe knows of the risk. While public health law requires reporting both your patient and any known sexual partners to local health officers, it is generally advisable to encourage the

patient to share this information with his wife on his own, giving him a bit more time if necessary.

In earlier days, when doctors would see a patient in whom the prognosis was poor, they may have ordered "slow code". It used to mean that give a half hearted attempt of resuscitation to document it on the chart.

I have heard of it during training from some old-timers but never should this be an option. Nowadays if the attending decides that the intervention (CPR) will be futile, the attending has the right to decide that NO code should be performed. Even though , technically it is the right answer for the exam, rarely does one see that as a unilateral decision as the attending discusses and convinces the family before doing this.

Minor wanting contraception (this is excerpted from the article on adolescent confidentiality):

If an adolescent asks you for contraceptives - you should not only give /prescribe them but you as a good physician must take extra time to explain their use and side effects as some adolescents

have no idea about these devices/pills and their limitations. It is wrong to call the parent in to tell them about these issues or tell the police about something the adolescent vested in you or to deny this young individual care that an adult would get routinely from you.

Only abuse, suicide or homicide cannot be granted confidentiality.

As to which method to use for contraception, one must stress the importance of barrier methods (condoms) in prevention of STDs which is not provided by Oral contraceptive pills. Safer still would be to use BOTH together.

General approach to the child with a limp.

A conservative approach indicated, since very few children without systemic symptoms or true arthritis have any significant disorder. If pain persists or you suspect an acute arthritis, diagnostic evaluations can include a CBC, with differential ESR, anti-streptolysin O titer, rheumatoid factor, throat and urine cultures, ultrasonography for joint effusion, and radiographic studies of the hips. A joint tap should be done when there is clinical suspicion of a septic joint and an effusion by U/S.

Differential Diagnosis and Approach

Transient tenosynovitis (irritable hip).

Most common cause of limp (well over 90% in some series).
Frequently follows URI or streptococcal infection.
May have joint effusion but not true arthritis.
Generally resolves within 24 to 48 hours with rest and ibuprofen-acetaminophen.

Septic hip joint. A true emergency
Generally febrile with elevated ESR, WBC >18,000/mm3, but lab values may be normal and may overlap with those of other illnesses.
Will generally look sick and hold hip in flexion and external rotation.
Effusion present on ultrasonography but may also have effusion with transient tenosynovitis (71%). Tap is diagnostic.
Relatively sudden onset and rapid course.
Treat with antistaphylococcal antibiotics. Requires orthopedic consultation and surgical intervention.

Legg-Calvé-Perthes disease (aseptic necrosis of the femoral capital head).
Most common between 5 and 10 years of age.
Slow insidious onset of limp and hip pain, which is progressive. Have limitation of motion of the hip.
Diagnosis by radiography of affected hip (see lucency of femoral head and eventually sclerosis and destruction of femoral head). Bone scan may reveal abnormalities earlier than radiograph would show.
Treatment requires consultation with orthopedics staff and includes rest, anti-inflammatories, and casting for more severe cases.

Slipped femoral epiphysis.
Generally seen in overweight teenagers, especially boys.
May have insidious onset of pain but can also follow acute trauma.
May be pain with passive motion.
Diagnosis by frog-legged radiographs of both hips.

Treatment is by orthopedic referral and surgical fixation.

Osgood-Schlatter disease.
Characterized by pain over the tibial tubercle, which is usually unilateral.
Usually occurs in active children between 10 and 15 years of age.
Treatment is rest and NSAIDs.

Diskitis.
An inflammatory process of the disk or disks (usually L3 to L5), which may be infectious in cause (staphylococcal primarily).
Presents with refusal to walk or limp, low-grade fever, and "tripod posturing" - leaning back with back extended onto outstretched arms when sitting.
Generally have pain over involved disk area but may also have pain on straight-leg raising, hip motion.
Sedimentation rate almost always elevated, but CBC may be normal. Disk space may be narrowed on radiograph. Bone scan will show inflammatory focus.
Treatment is generally supportive with anti-inflammatories but may need antibiotics. Orthopedic consultation recommended.

Juvenile rheumatoid arthritis.
Defined as presentation of rheumatoid arthritis before 16 years of age.
20% have "Still's disease," which is JRA plus fever, thrombocytopenia, splenomegaly, generalized adenopathy.
40% have onset in one or a few joints.
40% have polyarticular onset similar to adult onset.
75% have complete remissions.

Jaundice is visible when a baby has a serum bilirubin level that exceeds 5 mg/dl. Generally jaundice is visible first on the head and progresses to the feet. It resolves with the opposite pattern, the feet clearing first.

Physiologic Hyperbilirubinemia
Usually not present in first 24 hours.
Rarely increases by more than 5 mg/dl in 1 day.
Peaks at 48 to 72 hours in full-term infants and 4 to 5 days in the premature ones.
Serum bilirubin does not exceed 13 mg/dl in the full-term infant and 15 mg/dl in the preterm infant.
Direct bilirubin fraction is generally <2 mg/dl.
Physiologic jaundice disappears by 1 week in full-term infants and by 2 weeks in premature infants.
Any infant that does not meet the above description has nonphysiologic hyperbilirubinemia and should be worked up.

Nonphysiologic Hyperbilirubinemia
Those with primarily elevated direct bilirubin. Direct bilirubin >15% of total and therefore conjugated by the liver.
Infections including sepsis, perinatally acquired viral infections including hepatitis, and intrauterine viral infections (hepatitis B, TORCHS).
Metabolic abnormalities including Rotor syndrome and Dubin-Johnson syndrome.
Anatomic abnormalities including biliary atresia and obstructions as with a choledochal cyst.
Cholestasis from CVN/TPN antibiotics (especially ceftriaxone).
Galactosemia, tyrosinosis, cystic fibrosis, hereditary fructose intolerance.
Those with primarily elevated indirect bilirubin. Therefore not conjugated by liver. Two basic

mechanisms:

From increased production of bilirubin (therefore hemolysis or hematoma breakdown).

With positive direct Coombs' test (mother's antibodies on child's cells). Isoimmunization (Rh, ABO, minor blood group), erythroblastosis fetalis.

With negative Coombs' test and RBC morphologic abnormalities. Spherocytosis, thalassemias, G6PD deficiency, elliptocytosis, etc.

Extravascular blood. Cephalohematoma, severe bruising, cerebral and pulmonary hemorrhage.

DIC, other hemolytic anemia

Polycythemia resulting from delayed clamping of cord, twin-twin transfusion, maternal-fetal transfusion.

From delayed excretion of bilirubin.

Inherited disorders of bilirubin metabolism including Crigler-Najjar syndrome, Gilbert's disease, Dubin-Johnson syndrome, Rotor syndrome.

Hypothyroidism and prematurity.

Breast Milk Jaundice

Progressive increase in bilirubin from day 4, peaks at 10 to 15 days of life in breast-fed infant.

Treatment

Treat the underlying disorder.

Ensure adequate hydration, caloric intake, stooling.

Phototherapy is not indicated in those with liver disease or jaundice secondary to obstruction.

Prophylactic phototherapy. Indicated for infants showing a rapid rise in bilirubin (>1 mg/dl per hour) and as a temporizing measure when one is contemplating exchange transfusion.

Phototherapy. Serum bilirubin usually decreases by 2.5 to 3 mg/dl per day. Bilirubin level should be followed every 12 hours. Phototherapy should be discontinued when the bilirubin reaches levels of about 13 mg/dl. Bilirubin levels should be rechecked again 12 hours after discontinuation, to assess for recurrence.

Exchange transfusions. Needed when bilirubin level rises to 25 mg/dl or more in nonhemolytic jaundice, >20 mg/dl in hemolytic jaundice, or unresponsiveness to phototherapy.

A 5-year-old white male is brought to your office for treatment 24 hours after being stung on the right hand by a bee. He has marked swelling of the right hand and forearm, redness, itching, and mild pain at the sting site. His mother says that the swelling began about 2 hours after the sting and is continuing to worsen. She is quite concerned and requests a referral to an allergist to have the child evaluated.

Which one of the following would be appropriate advice?

a. The child is unlikely to have anaphylaxis with subsequent stings, and he should be treated with antihistamines and antibiotics now
b. The child is unlikely to have anaphylaxis with subsequent stings, and he should be treated with antihistamines only now
c. The child's parents should carry an anaphylaxis emergency treatment kit with them at all times to treat future reactions
d. The child is at risk for anaphylaxis from subsequent insect stings, and immunotherapy may be appropriate
e. This type of reaction is not likely to occur with subsequent insect stings

B

This patient is experiencing a large local reaction to an insect sting. Symptoms usually worsen for 48 hours and may last up to 7 days. People who have had large local reactions to stings tend to have similar reactions after subsequent stings. The risk of anaphylaxis is less than 5% per episode. Immunotherapy will not prevent large local reactions, thus venom skin tests serve no purpose. An anaphylaxis emergency kit (Ana-Kit) is designed to treat anaphylactic reactions and would not be appropriate for this patient. Antihistamines and aspirin, with or without short-term steroid therapy, constitute appropriate treatment. Cellulitis rarely develops after an insect sting, and antibiotics are not indicated in most cases.

A 5-year-old African-American male fell off his bicycle and hit the back of his head on a hard surface. There was no loss of consciousness. No other injury was noted. He was obviously agitated and restless, and his only complaint was a loss of vision. When you see him, his examination is unremarkable except for moderate swelling over the occipitoparietal area of the scalp. His skin is intact, and no gross neurologic deficit is noted except for the visual loss. A CT scan is negative. An EEG shows only slight slowing of activity.

Which one of the following statements is true regarding this patient?

a. The child's vision will probably return within 24 hours
b. The child should be hospitalized for 72 hours for further observation

c. It will be months before the child's vision returns

d. The loss of vision is probably caused by damage to the optic nerve

A

Transient cortical blindness following mild head trauma is usually associated with a benign outcome. The special features are mild head trauma, no loss of consciousness, onset of blindness occurring within hours of the trauma, duration of blindness less than 24 hours, absence of skull fracture or visible injury on CT scan, and no other neurologic deficits. The EEG shows initial slowing with normalization on follow-up.

management of monoarticular joint swelling

MANGAGENT OF MONOARTICULAR SWELLING:

1.FIRST STEP XRAY

2.BEST STEP ARTHEROCENTESIS

3.NEXT STEP LOOK AT SYNOVIAL FLUID--# OF WHITE CELLS

4. white cells 25-50K=OSTEOARTHERITIS

wHITE cELLS 50-75k=GOUT/PSEUDOGOUT

White Cells More then 75k=Septic Joint

5. SEPTIC JOINT----ADMIT+ Empiric Abx coverage with IV CEFTRIAXONE+IV VANCOMYCIN for MRSA

positive

6. GOUT/PSEUDIGOUT---Outpatient if vitals stabe---Treat wtih INDOMETHACIN 50MG Q8hrs PRN.
PROPHYLAXIS---URINE URIC ACID>900 GIVE ALLOPURINOL
---urine uric acid<700 GIVE PROBENECID
ALWAYS GIVE COLCHICINE.6 BID Prior to prophylaxis.
ALWAYS START PROPHYLAXIS 2 WEEKS AFTER ACUTE EPISODE.
7. OSTEOARTHRITIS: Diagnostic clue= WEIGHT BEARING JOINT, OVERUSE,OBESITY, XRAY---OSTEOPHYTES,MANAGEMENT---NSAIDS AND BED REST 1-3 DAYS.....NOT MORE THEN 3
DAYS---this fact is based on a study that USMLE 3 wants us to know. Therefore remember 1-3 days max bed rest!

A 24-year-old woman presents to the emergency department with a severe, throbbing headache of the right supraorbital area for the past hour. She also complains of nausea and photophobia. She has had similar attacks in the past, often brought on by menstruation. About 45 min ago she took 400 mg of ibuprofen. Which of the following would be the best therapeutic choice at this time?

A: Meperidine, 50 mg intramuscularly
B: Codeine, 60 mg orally
C: Naproxen, 750 mg orally
D: Sumatriptan, 6 mg subcutaneously
E: Verapamil, 300 mg orally

The answer is D

While the pathophysiology of migraine remains unclear, electrical stimulation of midline dorsal raphe in the brainstem leads to characteristic pain. Pharmacologically, serotonin-mediated neurotransmission appears to be critical in the generation of migrainous pain. Sumatriptan and dihydroergotamine both work by blocking 5-hydroxytryptamine receptors (type I, especially the D subtype). While nonsteroidal anti-inflammatory agents such as ibuprofen and naproxen are helpful in patients with mild to moderate migraine, presumably by reducing inflammatory stimuli from cyclooxygenase inhibition leading to reduced prostaglandin generation, the patient in the question has too severe an attack to benefit from the additional use of this class of agents. Also, the use of narcotic analgesics as a primary therapy is no longer recommended; sumatriptan will relieve a migraine headache in approximately 75 percent of patients within 1 h of treatment. Unfortunately, because of its short half-life (with either oral or subcutaneous administration), headache recurs in up to one-third of patients. Sumatriptan-associated side effects are usually mild to moderate and highly reversible; they include reactions at the injection site, flushing sensations, and neck pain or stiffness. Although up to 5 percent of patients treated with sumatriptan experience chest tightness or pressure, myocardial ischemia is exceedingly rare. Nonetheless, this drug should not be given to those with a history of myocardial infarction, ischemic heart disease, or Prinzmetal's angina. Both beta-adrenergic antagonists and calcium channel blocking drugs are effective prophylactic agents.

A couple in their 50s comes to your office for a consultation. The man says his back has been hurting lately. When you examine him, you find only a mild case of muscle strain. His wife

insists that it must be more serious than that because it has prevented them from having sex over the last 2 months. Upon further questioning, you discover that 2 months earlier the man was impotent for the first time in his life after they had gone to a wedding party and consumed large amounts of food and more than their usual share of alcohol. His wife says that he appeared "quite frisky" at the party, but he could not achieve an erection later than night. Since then, he has avoided sex, citing his bad back as the cause. His wife is concerned about his back; she also states that there were many young and attractive women at the party that night, and she wonders if he no longer finds her attractive.

Which one of the following factors was the most likely cause of the man's initial impotence?

a. Aging
b. Back pain
c. Fear of failure
d. Alcohol
e. Overeating

D

Excessive consumption of food can suppress libido, but alcohol may cause even greater dulling of sexual responsiveness and an inability to achieve or maintain an erection. Secondary impotence developing in a man in his late 40s or early 50s is associated more often with excessive alcohol consumption than with any other single factor.
The fear of failure, both alcohol-associated and as part of one's expectations about aging, is the most critical factor in older men's withdrawal from sexual activity. Once impotent under any circumstance, men often avoid sex rather than face the ego-shattering experience of repeated

inadequacy. Both women and men will benefit from insight into the real reasons for the man's withdrawal, and women should understand that it is not the personal rejection that it may appear to be. Avoiding alcohol may prevent further episodes of impotence, but it will not help reverse the sexual withdrawal that occurs secondarily. Treating the back pain with anything other than a mild analgesic obviously misses the point of the couple's office visit. Finally, encouraging further attempts at coitus may only aggravate the problem. Rather, it is important to explain to the couple that sexual activity need not be equated with coitus, and that their emotional needs can be met with caresses and embraces. This will help to allay the man's performance anxiety and allow a return to potency.

A 35-year-old white female with a history of headaches complains of joint pains. A review of systems reveals that she also has intolerance to multiple different foods, stomach bloating, rectal pain with defecation, dysmenorrhea, chronic irregular periods, and difficulty swallowing. She denies depressive symptoms or drug abuse. She regularly takes several vitamins and acetaminophen. Her physical examination, WBC count, hemoglobin level, and kidney and liver function tests are normal.

The most likely diagnosis is

a. depression with melancholia
b. somatization disorder
c. ulcerative colitis

d. Lyme disease
e. systemic lupus erythematosus

B

The patient described in this case has four pain symptoms, two gastrointestinal symptoms, one sexual/reproductive symptom, and one pseudoneurologic symptom, all with no apparent cause, and thus meets the diagnosis of somatization disorder.

A 16-year-old white female comes to your office complaining of sleep disturbances, recurrent nightmares, and early-morning awakenings, after which she is unable to return to sleep. Consequently, she feels tired and weak with lack of energy during the day. Her appetite is poor, and she has lost about 10 lb over the past 2 months. She is concerned about having intermittent abdominal cramps and headaches, and thinks there is something wrong; she appears anxious and sad. Physical examination reveals no abnormalities.

At this point, you should

a. assess the potential risk of suicide
b. prescribe diazepam (Valium)

c. reassure the patient that her physical examination is normal and ask her to return if weight loss continues
d. order an upper gastrointestinal roentgenographic series

A

Depression is almost always accompanied by a number of physical complaints. Sleep disturbances, particularly early morning awakenings, and weight loss of 10 lb or more usually indicate a serious depression. It is most important to assess the potential risk of suicide, a significant associated danger. Diazepam could potentially worsen the depression. Instead of reassurances, exploration of feelings and aggravating factors, as well as close follow-up is indicated. Although an upper gastrointestinal roentgenographic series may be a necessary component of further evaluation, it is a less significant consideration at this point.

Recurrent spontaneous attacks of anxiety accompanied by somatic symptoms best describes which psychiatric illness?

a. Somatization disorder

b. Post-traumatic stress disorder

c. Panic disorder

d. Generalized anxiety disorder

C

Although anxiety is a prominent symptom in many psychiatric illnesses, recurring spontaneous attacks of anxiety are a hallmark of panic disorder. There is an overlap of symptoms between generalized anxiety disorder and panic disorder, but in generalized anxiety disorder symptoms of anxiety are continually present, rather than occurring in discrete attacks. In post-traumatic stress disorder, the patient experiences highly disturbing memories of a specific emotionally traumatic event. Patients with somatization disorder experience multiple somatic complaints that are often accompanied by anxiety symptoms, but the somatic complaints themselves, rather than the anxiety surrounding them, are the reason for the visit to the physician.

A 35-year-old white female schoolteacher presents with anxiety, fatigue, and insomnia. The symptoms began after a heart murmur was discovered during an employment physical. An echocardiogram revealed mild mitral valve prolapse. A student recently died suddenly on a school field trip because of undiagnosed idiopathic hypertrophic cardiomyopathy. Now the patient is afraid she will die in a similar manner; she is anxious, sleepless, and fearful of physical activity.

The most appropriate action for the physician to take is to

a. prescribe a benzodiazepine in conjunction with a referral to the mental health clinic for group psychotherapy
b. order a stress test and write an exercise prescription
c. reassure her regarding the benign course of her condition and give her the American Heart Association booklet entitled Mitral Valve Prolapse
d. refer her to a cardiologist for a reassuring second opinion

C

Much of the psychological distress caused by the diagnosis of mitral valve prolapse is related to the lack of information and the fear of heart disease, which is often reinforced by the death of a friend or relative. A clear explanation of mitral valve prolapse, along with printed material, is a

powerful aid in relieving the patient's emotional distress. It is important to avoid reinforcing illness behavior with unnecessary testing, prescribing, or referrals to specialists.

Various Types of Headaches

Primary headaches.

Migraine without aura (common migraine). Must have at least 5 attacks that meet the following criteria:
Headache attacks last 4 to 72 hours.
Headache has at least 2 of the following:
Unilateral location
Pulsating quality
Moderate or severe intensity (inhibits daily activity)
Aggravation by routine physical activity
During the headache, at least 1 of the following:
Nausea or vomiting
Photophobia and phonophobia
No organic cause found by history, PE, neurologic exam.

Migraine with aura (classical migraine). Must have at least 2 attacks fulfilling the following criteria:

At least 3 of the following are present:

One of more fully reversible aura symptoms indicating focal cerebral cortical or brainstem dysfunction.

At least one aura symptom develops gradually over more than 4 minutes.

No aura symptom lasts more than 60 minutes (duration proportionally increases if >1 aura symptom present).

HA follows aura with free interval of less than 60 minutes (may begin before or with the aura).

HA usually lasts 4 to 72 hours but may be absent.

No organic cause found by history, PE, neurologic exam.

Tension type.

Headache with at least 2 of the following:

Pressing or tightening quality

Mild or moderate intensity

Bilateral location

No aggravation by routine physical activity

No organic cause found by history, PE, neurologic exam.

Tension headache is separated into two subtypes based on frequency:

Episodic

Headache lasting 30 minutes to 7 days

No nausea or vomiting with headache

Photophobia and phonophobia are absent, or one but not the other is present

At least 10 previous headaches as above, with number of headache days <180/year and <15/month

Chronic

Headache averages 15 days/month (180 days/year), 6 months

No vomiting

No more than 1 of the following: nausea, photophobia, or phonophobia

Cluster (episodic or chronic).

Severe unilateral orbital, supraorbital, or temporal pain lasting 15 to 180 minutes untreated.

Headache is associated with at least 1 of the following on the pain side:

Conjunctival injection

Lacrimation

Nasal congestion

Forehead and facial sweating

Rhinorrhea

Miosis

Ptosis

Eyelid edema

Frequency of attacks ranges from 1 to 8 daily.

At least 5 attacks occur as above.

Chronic paroxysmal hemicrania.

Severe unilateral orbital, supraorbital, or temporal pain always on the same side, lasting 2 to 45 minutes.

Attack frequency >5 a day for more than half the time (periods of lower frequency may occur).

Headache is associated with at least 1 of the following on the pain side:

Conjunctival injection

Lacrimation

Nasal congestion

Rhinorrhea

Eyelid edema

Ptosis

Absolute effectiveness of indomethacin (150 mg/day or less).

At least 50 attacks occur as above.

No organic cause found by history, PE, neurologic exam.

Secondary headaches.

Increased intracranial pressure (pseudotumor cerebri). Idiopathic, 19 of 100,000 in obese young females. Has been associated with tetracycline use. Often presents with chronic retrobulbar HA exacerbated by eye movements. Also visual changes, diplopia, meningeal signs, and paresthesias. Exam may reveal papilledema and cranial nerve VI palsy. CSF normal except for elevated opening pressure (250 to 450 mm H2O). Treatment: weight loss, serial LPs to remove 20 to 40 ml, diuretics, acetazolamide 500 to 1000 mg QD, prednisone 40 to 60 mg QD, and rarely a shunt.

Tumor. HA most common only complaint, though only 50% of tumors present with HA. 17% have "typical" tumor HA (worse in morning, nausea, vomiting, worse bending over). Usually other neurologic signs or symptoms help localize tumor. Obtain head CT with contrast or MRI for patients with chronic HA presenting with new symptoms or abnormal neurologic signs. Treatment: neurosurgical consultation.

Arteritis (giant cell, temporal). Most common symptom is nonspecific headache often with scalp or temporal artery tenderness. Jaw claudication pathognomic. Elderly females at increased risk. Sedimentation rate elevated. Biopsy reveals arteritis. Treatment:

Acute effects of substance use. Occurs within a discrete period after substance use and disappears with elimination of use.

Substance withdrawal. Occurs after >3 months of high daily dose of substance. Occurs within hours after elimination and relieved by renewed intake. Disappears with withdrawal of substance. This includes caffeine use.

Meningitis and herpes encephalitis.

Drug-rebound headache. Aggravating factors: ergotamine induced, analgesic abuse (such as >50

g/month ASA or equivalent mild analgesic, >300 mg/month diazepam.) Treatment: stop drug.

Carbon monoxide poisoning.

Subarachnoid hemorrhage (SAH). Generally have acute onset of worst headache of life. May have nausea, vomiting, mental status changes, or loss of consciousness. Most (59%) have a "warning leak" before severe event and may have antecedent headaches for weeks. Since mortality is 50% for each bleed, if one can pick up the warning leak, one can prevent death and illness.
May have mental status changes and meningeal signs but may not (39% initially free of CNS symptoms or signs).
Only 10% have initially focal exam.
May have fever and leukocytosis from meningeal irritation.
CT scan will find only about 90% of SAH (98% in third-generation scanners). All those who need a CT also need an LP. CT should be done on those with severe headache that is different from their usual headache or new onset of headache. In one study, 33% of those with new onset of severe headache and no CNS signs or symptoms and no other obvious cause of headache had SAH.
Response to nonnarcotic and narcotic analgesia does not rule out SAH.
Nimodipine reduces the risk of cerebral vasospasm, which may contribute to mortality. Dose is 60 mg Q4h for 21 days.

Physical examination. Vitals (BP and temperature), neurologic deficits, papilledema, retinal hemorrhage, cranial bruit, thickened tender temporal arteries, trigger point for fascial pain, ptosis, dilated pupils, and stiff neck.

Ancillary tests not necessary if physical exam is negative. Routine CT scanning has low yield except when headaches are severe - an indication that subarachnoid hemorrhage or a neurologic deficit may be present.
CT should be done to rule out mass lesion.

An LP should be done if CT negative and suspect SAH (CT will miss about 10%).
Be sure to rule out meningitis, temporal arteritis by the clinical setting. Obtaining a sedimentation rate in elderly patients with new-onset headaches is prudent.
Remember simple causes such as sinusitis, toothache, temporomandibular joint syndrome.

Treatment for Migraine Headache

General. Taper off analgesics to prevent rebound HA and start preventive medications.
Depression (if identified) needs to be treated.

Nonpharmacologic prophylaxis for migraine.
Dietary changes.
Avoid monosodium glutamate, nitrates, and alcohol.
Spread out caffeine evenly.
Lifestyle changes. Regular eating, sleeping, and exercise patterns.
Behavioral therapies. Biofeedback, stress management, and self-help groups.

Acute therapy (outpatient).
Acetaminophen or ASA usually are not effective in severe headaches because of delayed gastric emptying. The uses of metoclopramide 10 mg PO may enhance the efficacy of oral medication.
NSAIDs. Such as ibuprofen 400 to 800 mg PO TID or QID or naproxen sodium 550 mg PO BID or TID with food.
Fiorinal 1 or 2 tablets Q4-6h up to 4 per day and twice per week. Avoid overuse.
Abortive therapy for migraines. Ergotamine derivatives contraindicated in peripheral or coronary artery disease. Do not use sumatriptan in those who have had an ergot preparation within the last 24 hours and vice versa.
Midrin 2 caps PO initially and then 1 capsule Q1h up to 5 in 12 hours.
Sumatriptan (Imitrex) 6 mg SQ; may repeat in 1 hour; maximum 12 mg/24 hours.
Contraindicated if concomitant CAD or uncontrolled hypertension. Do not use if patient is given

an ergot alkaloid in the last 24 hours. Many (up to 50%) will require rescue medicine because of sumatriptan's 2-hour halflife. Oral sumatriptan available but not so effective.
Cafergot 1 or 2 tablets PO; may repeat up to 4 tabs/attack or 10/week.
Ergotamine 2 mg PO or SL; may repeat in 30 minutes up to 6 mg/24 hours or 10 mg/week.
Prochlorperazine 25 mg PR BID PRN can be used to abort the migraine at home.

Acute therapy (emergency room): migraine.
Antiemetics may in themselves abort the headache.
Prochlorperazine (Compazine) 10 mg IV or chlorpromazine 25 to 75 mg IV. Chlorpromazine has fallen out of favor because of hypotension, which can be treated with IV NS.
Metoclopramide 5 to 10 mg IV Q8h. Often given with dihydroergotamine (DHE) to prevent DHE-induced nausea. May be combined orally with ASA.
NSAIDs (ketorolac [Toradol] 60 mg IM, indomethacin [Indocin] 50 mg PR BID or TID). Not so effective in migraines.
Dihydroergotamine (DHE) 0.75 mg IV over a few minutes preceded by prochlorperazine or metoclopramide 10 mg IV. Another 0.5 mg of DHE may be given in 30 minutes. Contraindicated in peripheral or coronary artery disease or those who are >60 years of age or those who have had sumatriptan.
Meperidine (Demerol) 50 to 100 mg IM Q3h PRN.
Dexamethasone 4 mg IM or a short course of prednisone (40 to 60 mg PO QD), combined with analgesics above, if migraine continues >24 hours.
Sumatriptan (Imitrex); see above for dose. Oral sumatriptan also available but less effective.
Lidocaine 100 mg IV once for intractable headache. Patient should not drive after treatment. Risk for seizures, arrhythmia, confusion.
Transnasal butorphanol 1 mg (1 spray in 1 nostril) repeated if necessary in 60 to 90 minutes.

Prophylaxis.
Amitriptyline 10 to 200 mg PO QHS. Other tricyclic antidepressants (TCAs) also effective.
Propranolol 20 to 60 mg PO BID to QID. Long-acting form can be used. Consider switching to a second beta-blocker if first one fails after adequate trial period (6 to 8 weeks). Contraindicated in

asthma, heart failure, and diabetes.

Verapamil 40 to 80 mg PO TID (80 to 240 mg/day). Diltiazem and nifedipine are less effective. More beneficial in migraine with aura or cluster headache. Trial should be .2 months. Contraindicated in heart failure and heart block. Constipation is a common side effect.

NSAIDs, especially useful for menstrual migraine.

Cyproheptadine 2 to 4 mg PO QID. Less effective than methysergide but safe.

Methysergide (Sansert) 1 to 2 mg PO QID. Should not use longer than 6 months without a 1-month drug holiday to avoid fibrosis. Contraindicated in peripheral or coronary artery disease.

Ergotamine (low dose) 1 mg PO BID, not to exceed 10 mg/week (2 days/week skipped), contraindicated in ischemic diseases.

Anticonvulsants.

Carbamazepine 200 to 800 mg PO daily dose divided BID to QID.

Phenytoin 300 to 800 mg PO daily dose divided QD to TID. Efficacy not shown for migraine with aura.

Valproic acid 250 to 1500 mg PO daily dose divided BID to QID titrated up to effective blood levels (50 to 100 mg/L).

Fluoxetine 10-30 mg PO Qa.m. Other SSRIs are also effective.

Treatment for Severe Tension Headache

Symptomatic treatment. Simple analgesics, NSAIDs, or TCAs as above.

Preventive treatment. TCAs, beta-blockers, or calcium-channel blockers as above.

Treatment for Cluster Headache

Acute treatment is by any of the following:

Oxygen inhalation through a nonrebreathing mask at a flow rate of 6 to 8 L/min for 15 minutes is 70% effective.

Nasal lidocaine 4% solution (15 drops) or 5% ointment (3 swabs) intranasally on ipsilateral side may be abortive.

Sumatriptan is especially effective for cluster headache because by definition they last <3 hours. However, this is not an approved usage.

Parenteral therapy as above.
Prophylactic treatment. Low-dose oral ergotamine, methy-sergide, prednisone (60 mg QD for 1 week with a rapid tapering off), verapamil (80 to 160 mg TID), lithium carbonate 300 mg BID or TID, with or without valproate 250 to 1500 mg total daily dose divided BID to QID.

Rates of successfuln pregnancy following 3 spontaneous losses(habitual abortions) are
a. very poor
b. slightly worse than those in the baseline population
c. No different from those in the baseline population
d. just under 50%
e. good unless cervical incompetenence is diagonosed
Give explanation

E

The data applies to cases of rec abortion without identifiable causes.
if 3 preg lost- 70-80% success
if 4/5 preg lost- 65-70% success.
Hope this helps.

DURING PREGNENCY OR LACTATION, WHAT HAPPENS TO BREAST CANCER OCCURING RATE:

A INCREASE

B DECREASE

C REMAINS THE SAME

PLEASE ANSWER WHY DURING PREGNENCY OR LACTATION, WHAT HAPPENS TO BREAST CANCER OCCURING RATE:

A INCREASE

B DECREASE

C REMAINS THE SAME

PLEASE ANSWER WHY

Pregnancy MAY accelerate the growth of CA Breast- inflammatory CA is infact most common in lactating mothers.

Prepregnancy mammography is advised in women>35 expecting

No effect of cyclic hormones during this period

example:

lactation decreases breast cancer risk

Have more kids to reduce your risk of breast & uterine Cancer

Nulliparous women more risk of having cancer

RALOXIFENE

Introduction:

Raloxifene is in a class of drugs called selective estrogen receptor modulators, or SERMs. These drugs have been called "designer estrogens" because they mimic the action of estrogen where it's wanted (i.e., in the cardiovascular and skeletal systems) but avoid estrogen-like action where it's not wanted (i.e., in breast and uterine tissue). It's not fully known how this works. But scientists theorize that individual SERMs cause changes in the shape of estrogen receptors in different organs, causing the SERM to stimulate some types of tissue but not others.

ADvantages:

1. Raloxifene (Evista), is a drug that mimics estrogen's beneficial effects on bone density in postmenopausal women. It also mimics some of estrogen's beneficial effects on blood lipids (fats). Unlike estrogen, however, it has been shown to lower the risk for breast cancer and may lower the risk of uterine cancer.

2. Bone density — Raloxifene increases bone mineral density significantly when compared to placebos. Increasing bone density is important to help protect against fractures of bones made vulnerable by osteoporosis. No study has yet evaluated raloxifene in a head-to-head comparison with estrogen. However, the placebo-controlled studies indicate that raloxifene increases bone density by about half what might be expected with estrogen or with alendronate (Fosamax).

3. Breast tissue — Women taking raloxifene have no more breast tenderness or abnormalities on their mammograms than those taking placebos. There is evidence that raloxifene decreases the risk of breast cancer, but more study is needed

4. Uterine tissue — Raloxifene does not cause precancerous changes of uterine tissue, and there's no spotting or bleeding as is commonly associated with oral estrogen.

5. (Overall/general advantages all summed up)

The advantage of raloxifene over HRT is having bone protection without the cancer risk. A great benefit will lie in adherence to the prescribed treatment plan. Women will be more likely to take this medication because their fears about a potential increased risk of breast or uterine cancer will be removed. They will also not be bothered by unwanted vaginal bleeding or breast pain. Women who take their medication will, in turn, see the benefits in terms of improved long-term health.

DISADVANTAGES

1.Hot flashes — Unfortunately, raloxifene does not relieve hot flashes, and there is concern that in some doses it might even make hot flashes worse.

2. Blood fats — It's not yet clear whether raloxifene and other SERMs will have long-term beneficial effects on the risk of heart disease.

Raloxifene does lower the blood level of total cholesterol and low-density lipoprotein cholesterol (the bad cholesterol). Unfortunately, unlike estrogen, raloxifene does not appear to increase high-density lipoprotein (the good cholesterol).

3.Leg cramps are also reported more frequently in women taking raloxifene. Women taking raloxifene are at an increased risk of developing a deep-vein thrombosis or clots.

4. While raloxifene prevents bone loss, it has not been proven to reverse osteoporosis that has already occurred. Therefore, a woman with osteoporosis or skeletal fractures would best be treated with a potent anti-resorptive medication, such as Fosamax.

5.Raloxifene does not alleviate menopausal symptoms of hot flashes, insomnia, mood swings, or night sweats. In fact, some women have noticed an increase in hot flashes during the first few months of treatment with raloxifene.

6.Raloxifene is contraindicated in women who are, or may become, pregnant. Women need to be aware of the potential hazard this drug poses to any pregnancy that occurs while taking the medication. Raloxifene is excreted in breast milk and is therefore also contraindicated in nursing women. A history of venous thrombosis is, similarly, an absolute contraindication to raloxifene use.

A 42-year-old alcoholic male presents with a 6-day history of binge drinking. Serum chemistry tests reveal the following:

Electrolytes (mmol/L): Na+ 145; K+ 5.0; Cl- 105; HCO3- 15
BUN: 7.1 mmol/L (20 mg/dL)
Creatinine: 133 g/L (1.5 mg/dL)
Glucose: 9.6 mmol/L (172 mg/dL)

The nitroprusside (Acetest) agent gives a minimally positive result. Optimal therapy to ameliorate the patient's acid-base disorder would include 5% dextrose in

A: water

B: normal saline

C: normal saline, insulin, and sodium bicarbonate

D: half normal saline and insulin

E: half normal saline, insulin, and sodium bicarbonate

The answer is B

A reasonable way to approach the diagnosis of metabolic acidosis is to separate patients into those with an increased anion gap and those with a normal anion gap (hyperchloremic acidosis). A calculation of these unmeasured anions consists of the sum of plasma bicarbonate and chloride minus the plasma sodium concentration (the normal value is 8 to 16 mmol/L). Reasons for increased acid production include diabetic ketoacidosis, alcoholic ketoacidosis (as in this patient), starvation, lactic acidosis caused by circulatory failure, certain drugs and toxins, and poisoning resulting from salicylates, ethylene glycol, or methanol. Finally, renal failure increases the anion gap because sulfate, phosphate, and organic acid ions are not excreted normally. Normal anion gap acidosis is due to renal tubular dysfunction or colonic losses. Since the ratio of beta-hydroxybutyrate to acetoacetate is high in alcoholic ketoacidosis, ketonemia can be missed by the routinely employed nitroprusside (Acetest) reagent, which detects acetoacetate but not beta-hydroxybutyrate. Patients suffering from alcoholic ketoacidosis do well on infusions of glucose

and saline. Neither insulin nor alkali is required in these situations unless the acidosis is extreme (bicarbonate less than 6 to 8 mmol/L).

ANTHRAX FACTS

Anthrax is a disease caused by the organism bacillus anthracis. It derives its name from anthrakis, the Greek word for coal, because the cutaneous version of the disease can cause black skin lesions.

It is rarely seen in people and mostly affects hoofed animals, which become infected after ingesting the dormant forms of the bacteria - the spores - in soil. The spores can remain dormant in the soil for many years.
Traditionally people most at risk are those who work with animals or in industries processing animal products such as meat and wool.
Anthrax is not contagious. The only way to be infected is by being exposed to large numbers of spores.

Anthrax spores can infect humans through: 1. A cut or graze 2. In contaminated meat 3. By being inhaled.
The disease is classified by the way it is caught, so there are three types:

1. Cutaneous

2. Gastro-intestinal
3. Pulmonary or inhalation anthrax.

Evidence indicates that man is fairly resistant to anthrax. A study in the early 1960s found that mill workers inhaling up to 1300 spores over 8 hours suffered no ill effects. It is estimated that a human would have to inhale more than 10,000 spores to become infected.
Infection will only result if sufficient spores germinate and release harmful toxins.

Signs of the disease usually appear within three days, but in some cases it can be up to two months. An anthrax vaccine is available for people in high risk occupations or for members of the armed forces who may be in danger from biological warfare.

Inhalation / Pulmonary anthrax
This is the rarest form of the disease. Between 1900 and 1978 only 18 cases were recorded in the US.

Symptoms
Initially coughs and sneezes, much like a common cold. Within 36 hours chest pains, severe breathing problems and shock will develop. This type of anthrax usually results in death after about two days.

Effects
The spores are absorbed through the alveoli into the lymph system. They may not become active for up to two months. Once they germinate they release toxins which rapidly leads to hemorrhaging. Any delay administering antibiotics will reduce the chances of survival. Mortality rate for this type of anthrax is about 89%.

Treatment
The antibiotic being used to treat the current cases in the US is ciprofloxacin, known in the UK as ciproxin.

Gastrointestinal anthrax

This type of the disease is rare and develops after a person eats meat contaminated with anthrax.

Symptoms

Intestinal anthrax is characterised by acute inflammation of the gut. Initial nausea, loss of appetite, fever and vomiting is followed by abdominal pain, vomiting of blood and acute diarrhea.

Effects

Without treatment it results in death for 24% to 60% of cases.

Treatment

Anthrax can be treated with antibiotics.

Cutaneous anthrax

Most anthrax infections occur through a cut on the skin. About 2,000 cases are reported annually.

Symptoms

Skin infections begin as an itchy bump which over 2-6 days develops into a boil and then a depressed black skin lesion.

Effects

After the spores germinate they release toxins which damage the skin tissues. The disease can spread throughout the body, but deaths are rare. With treatment mortality is less than 1%.

Treatment

The antibiotic being used to treat the current cases in the US is ciprofloxacin, known in the UK as ciproxin

A 75-year-old man presents with recurrent episodes of shortness of breath on minimal exertion. He has no prior significant past medical history. Physical examination reveals blood pressure of 110/70 without pulsus paradoxus, heart rate of 110, respiratory rate of 25, and temperature of 37°C (98.6°F) orally. Jugular veins are distended and the heart sounds are distant, but there are third and fourth extra heart sounds. The liver is enlarged, and pedal edema is present. The electrocardiogram shows nonspecific ST-T wave changes and occasional premature ventricular contractions. The chest x-ray reveals clear lung fields and a mildly dilated cardiac silhouette. Echocardiography reveals normal systolic function and thickened ventricular walls with a "speckled" appearance. Which of the following conditions is most consistent with the patient's clinical presentation?

A: Alcoholic cardiomyopathy
B: Hemochromatosis
C: Amyloidosis
D: Viral myocarditis
E: Tuberculosis

The correct answer is C. Amyloidosis

The restrictive cardiomyopathies are characterized pathophysiologically by an impairment to ventricular filling. The cardiac silhouette is usually mildly, if at all, enlarged. Electrocardiography typically displays low-voltage QRS complexes, atrioventricular conduction defects, and a host of nonspecific arrhythmias. Echocardiography frequently reveals normal systolic and increased left ventricular wall thickness. In amyloidosis, the left ventricular wall appears to be "speckled." While primary cardiac amyloidosis typically produces diastolic dysfunction or restrictive cardiomyopathy as in this question, systolic dysfunction, arrhythmias, and orthostatic hypotension may be alternative presentations. Hemochromatosis also may cause a restrictive picture, but the speckled appearance noted in the echocardiogram would be absent. Alcoholism and viral infections typically cause dilated cardiomyopathies. Chronic tuberculous pericarditis can manifest clinical symptoms similar to those seen in restrictive cardiomyopathy. Patients with constrictive pericarditis have clinical presentations similar to those of patients with restrictive cardiomyopathy but tend to have normal ventricular wall thickness on echocardiography, pericardial calcification, and the absence of third or fourth heart sounds on chest auscultation.

Each of the following patients was noted to have an abnormally high serum cholesterol and was placed on a reduced calorie, cholesterol, and fat diet for the past 3 months. None has any history of ischemic heart disease. In which of the following patients would it be most appropriate to

recommend lipid-lowering drug therapy at this time?

A: A 52-year-old smoker and diabetic with an LDL cholesterol value of 3.2 mmol/L (120 mg/dL)
B: A 60-year-old hypertensive woman with an LDL cholesterol value of 3.5 mmol/L (140 mg/dL)
C: A 50-year-old man with cholesterol of 6 mmol/L (230 mg/dL)
D: A 45-year-old man with LDL cholesterol of 5 mmol/L (200 mg/dL)
E: A 58-year-old male smoker with cholesterol of 5.5 mmol/L (220 mg/dL) and LDL cholesterol of 4 mmol/L (150 mg/dL)

The correct answer is D. A 45-year-old man with LDL cholesterol of 5 mmol/L (200 mg/dL) Given the clearly defined benefits of lipid lowering in patients at risk for ischemic heart disease, screening measurement of blood cholesterol levels (nonfasting) is recommended for all adult patients, especially young patients with a family history of premature heart disease. If hyperlipidemia is detected, secondary causes such as hypothyroidism, nephrotic syndrome, and uremia should be considered, along with stopping drugs that can aggravate the condition, including oral contraceptives, estrogens, thiazides, and beta blockers. Once these effects are considered, the primary step is attention to diet. Attempts should be made to bring the patient to normal weight and encourage the patient to undergo dietary therapy with reduced intake of calories, cholesterol, and saturated fat. However, patients who remain at high risk after 3 months of an intensive regimen of dietary therapy should be strongly considered for lipid-lowering drug therapy. Such therapy is recommended for any adult patient whose LDL cholesterol remains greater than 4.9 mmol/L (190 mg/dL) or greater than 4.1 mmol/L (160 mg/dL) in the presence of

two or more risk factors. A more aggressive approach is recommended for patients with a prior history of ischemic heart disease. Other risk factors for early atherosclerosis include diabetes mellitus, hypertension, familial hyperlipidemias, hypothyroidism, systemic lupus, and homocysteinemia. Drugs that act to lower LDL cholesterol include bile acid-binding resins such as cholestyramine, nicotinic acid, and hydroxymethylglutaryl coenzyme A (HMG-CoA) reductase inhibitors.

Chief complaint: An 8-month-old infant with fever and irritability.
History of present illness (HPI): You are in general pediatric practice. A mother brings in an 8 month old male child because of fever and irritability for five days. On the second day of illness the child was seen at a local emergency room where the physician found no source for the fever and prescribed acetaminophen. Fever and irritability persisted. The fever has been between 1 03 F and 104 F rectally. There are no other complaints and the child has been feeding well.
Physical examination reveals a febrile, irritable, circumcised male infant but is otherwise within normal limits. The child is consolable.

1. Which of the following aspects of management of this child is most important?
A. To keep the temperature below I 04 F rectally
B. To keep the temperature below 102 F rectally.
C. To determine the cause of the fever.
D. To begin your laboratory investigation.
E. Undress the baby and let the temperature come down

2. Statistically it is most likely that this child has
A. an acute viral infection.
B. occult bacteremia.
C. a urinary tract infection.
D. bacterial meningitis.

E. osteomyelitis.

3. The next day the child develops a rash. Physical examination reveals nonpitting swelling of the hands and feet, redness of the lips, bilateral bulbar conjunctivitis without exudate, an enlarged right cervical lymph node, approximately 2 x 3 cm, and a generalized, splotchy, erythematous macular rash. The pharynx is normal. Chest is clear. The child is irritable but in no distress. The neck is supple.
You expect that the CBC will reveal
A. Increased WBCs, increased neutrophiles, decreased platelets, and normal hemoglobin.
B. Increased WBCs, increased neutrophiles, increased platelets, and normal hemoglobin.
C. Elevated WBCs, normal neutrophiles, normal platelets, and normal hemoglobin.
D. Decreased WBCs, decreased neutrophiles, normal platelets, normal hemoglobin.
E. Decreased WBCs, decreased neutrophiles, decreased platelets, and decreased hemoglobin.

4. Other features of Kawasaki disease includes all of the following EXCEPT:
A. CSF pleocytosis.
B. Hydrops of the gall bladder.
C. Sterile pyuria.
D. Hematuria

5. The greatest concern for this disease regards the heart. The usual manifestation of cardiac involvement with Kawasaki syndrome is
A. Pancarditis.
B. Valvular disease.
C. Coronary artery aneurysms.
D. Endocarditis.
E. Pericarditis.
F. Dilated cardiomyopathy

6. The treatment of Kawasaki syndrome usually includes

A. Digitalis and lasix

B. Lasix and aspirin.

C. Aspirin and intravenous immunoglobulin (lgG).

D. lgG and steroids

E. Steroids and aspirin.

1. C is correct. Determining the cause of the fever is more important than treating the fever systematically. This is not to say that treatment of fever for the patient's comfort and the parents' reassurance is unreasonable; it is simply not nearly as important as determining the cause of the fever. The fever itself will not be harmful, and since most febrile seizures occur close to the onset of the fever, usually within the first 12 to 24 hours, it is unlikely that this child will have a febrile seizure.

   2. A is correct. The most likely diagnosis for this child is an acute viral infection. Although persistence of fever for five days makes other causes somewhat more likely than if the fever had been present for only one day, acute viral infection is still the most likely explanation.

   3. B is correct. You obviously recognized this child as probably having Kawasaki disease, a disorder of undetermined origin characterized by a variety of acute phase reactants including an elevated erythrocyte sedimentation rate, an elevated total white blood cell count with increased numbers of neutrophiles and a markedly elevated platelet count.

While an elevated platelet count is seen in a variety of inflammatory conditions, it is especially characteristic of Kawasaki disease.

4. D is correct, Hematuria is not a feature of Kawasaki disease. Although the urethra (sterile pyuria) can be a target organ in this disorder, the kidney and the bladder are not involved. Aseptic meningitis with CSF pleocytosis is not uncommon and hydrops of the gall bladder is also a feature.

5. C is correct. Coronary artery aneurysms are the classic and most common form of cardiac involvement in children with Kawasaki syndrome. With rare exceptions, it is the only cardiac manifestation.

6. C is correct. Aspirin and intravenous immunoglobulin are the treatments of choice for Kawasaki disease. There is evidence that a regiment of both medications decreases the incidence of coronary artery aneurysms, the major cause of mortality in this condition. The mechanism of action of lgG is unclear but presumably it somehow decreases the inflammatory response. Aspirin is used for its anti-platelet effect. A low dose for several months seems to decrease the incidence of coronary artery disease.
Steroids should not be employed in the routine treatment of Kawasaki disease. Although corticosteroids do relieve the fever and signs of inflammation in Kawasaki syndrome, several studies have suggested an increased incidence of coronary artery aneurysms in children receiving corticosteroids.

A 22-year-old man presents to the emergency department with the suddenonset of left hemiparesis. His wife reports that he has not felt well forat least a month and has had a weight loss of about 9 kg. On physical examination, his temperature is 38 °C (100.4 °F) and his blood pressure is 116/52 mm Hg. He is somewhat cachectic and hemiparetic. The cardiac examinationshows a murmur. The physical examination is otherwise normal.

What is the most appropriate investigation to be done in this patientin order to arrive at a diagnosis?

A. Blood cultures
B. Lumbar puncture
C. Radiography of the chest
D. Complete blood count, differential, platelet count, and erythrocytesedimentation rate
E. Biopsy of inguinal lymph node

The answer is A.
The appearance of focal neurologic signs in a young person raises awide differential diagnosis. Atherosclerotic cerebrovascular disease isuncommon in the 20-year-old age group. Among other diagnostic considerationsare an embolic event from a cardiac source, such as a valvular vegetationassociated with endocarditis or an atrial myxoma, vasculitis, tuberculomatousor bacterial brain abscess, brain tumor, aneurysm or arteriovenous malformation,and coagulation disorder such as thrombotic thrombocytopenic purpura orhyperviscosity syndrome caused by multiple myeloma.

Infective endocarditis must be considered in any patient with suddenfocal neurologic deficits who has no conventional risk factors, such asatherosclerosis. Neurologic complications occur in 25% to 40% of patientswith infective endocarditis. About 15% develop cerebral emboli with associatedneurologic symptoms. The easily associated triad of new focal neurologicdeficits, fever and changing heart murmur occurs in only 33% of patients.

A lumbar puncture should not be done in a patient with focal neurologic signs before a computed tomography (CT) or magnetic resonance imaging ofthe head.

A chest radiograph is not likely to reveal a specific etiology for the sudden neurologic event.

Similarly, complete blood count, differential,platelet count, and sedimentation rate could provide important clues tomany diagnostic possibilities, such as vasculitis, thrombocytopenic purpura,and multiple myeloma, but are unlikely to provide a specific etiology.

Bilateral inguinal adenopathy, especially when nodes are relativelysmall and rubbery from inconsistency, is a very common physical findingand not likely to be of significance. Biopsy of an inguinal lymph nodeshould be done only if less invasive tests fail to reveal a specific diagnosis

Mrs. Porter, who is 48 years old, presents to your office for a routine physical examination. She reports that she is healthy, takes no medications, and has no complaints. Recently, a friend of hers was diagnosed with diabetes, and she wants to know if she should be tested for diabetes, too. After conducting a careful and thorough review of her medical history, you find no symptoms of hypo- or hyperglycemia. The physical examination is entirely within normal limits.

1.What advice should you give Mrs. Porter regarding screening for diabetes?

A. Screening for diabetes is not indicated in asymptomatic patients..
B. Screening for diabetes is indicated only if she has a first-degree relative with diabetes.
C. Asymptomatic women should be screened for diabetes beginning at age 50..
D. Screening with a fasting plasma glucose (FPG) is appropriate at this time.
E. Screening with a glycosylated hemoglobin (HbA1c) is appropriate at this time.

2.An FPG is performed, and Mrs. Porter is within the normal (nondiabetic) range. What advice should you give her regarding the need for future screening?

A. Future screening is not indicated as long as she remains asymptomatic.
B. Annual FPG screening is recommended.
C. She should be screened again in 3 years.
D. She should be screened again in 5 years.
E. She should be screened again at age 60.

1.The answer is D. You should tell Mrs. Porter that screening with a fasting plasma glucose (FPG) is appropriate at this time. Undiagnosed type 2 diabetes is a common and significant health problem in the United States, with an estimated 8 million people currently undiagnosed. Vascular complications from diabetes often begin approximately four to seven years before the onset of clinical symptoms, and approximately 10% to 20% of patients have evidence of retinopathy and nephropathy at the time of diagnosis. The 1997 Report of the Expert Committee on the Diagnosis and Classification of Diabetes Mellitus strongly encourages regular screening for type 2 diabetes beginning at age 45 because there is a steep rise in the incidence of the disease after this age. The

FPG is the test of choice because it is easier to perform, faster, more convenient, more reproducible, and less expensive than the oral glucose tolerance test (OGTT). Testing to determine the HbA1c concentration is not recommended for the screening or diagnosis of diabetes because methods of measuring normal ranges are not standardized among laboratories.

2.The answer is C. She should be screened again in 3 years.
The Expert Committee recommends screening asymptomatic individuals for diabetes beginning at age 45. If the results of the screening tests are normal, screening should be repeated at 3-year intervals. This interval is based on the negligible likelihood of developing complications of diabetes within 3 years of a negative screening test.
However, earlier and more frequent screening should be considered for patients with the following risk factors:
Obesity
Family history of diabetes in first-degree relative
Member of high-risk ethnic group (African, Hispanic, or Native American)
History of gestational diabetes or delivery of baby weighing > 9 lbs.
Hypertension
HDL cholesterol < 35 mg/dL and/or triglyceride level > 250 mg/dL
Impaired glucose homeostasis on previous testing

Laboratory Tests for Evaluation of Hypertension

BASIC TESTS FOR INITIAL EVALUATION

Always included

Urine for protein, blood, and glucose

Microscopic urinalysis

Hematocrit

Serum potassium

Serum creatinine and/or blood urea nitrogen

Fasting glucose

Total cholesterol

Electrocardiogram

Usually included, depending on cost and other factors

Thyroid-stimulating hormone

White blood cell count

HDL and LDL cholesterol and triglycerides

Serum calcium and phosphate

Chest x-ray; limited echocardiogram

SPECIAL STUDIES TO SCREEN FOR SECONDARY HYPERTENSION

Renovascular disease: angiotensin-converting enzyme inhibitor radionuclide renal scan, renal duplex Doppler flow studies, and MRI angiography

Pheochromocytoma: 24-h urine assay for creatinine, metanephrines, and catecholamines

Cushing's syndrome: overnight dexamethasone suppression test or 24-h urine cortisol and creatinine

Primary aldosteronism: plasma aldosterone: renin activity ratio

A healthy 28-year-old laboratory technician consults you about a test he ran "for the heck of it." He is asymptomatic, and the results of his physical examination are within normal limits. However, laboratory studies show a total serum bilirubin level of 1.9 mg/dL (N < 1.0) with an indirect level of 1.3 mg/dL (N < 06). Determinations of liver enzyme and serum alkaline phosphatase levels are normal. The hemoglobin level is 15.0 g/dL (N 13-18) and stable; the reticulocyte count is 1% (N 0.5-1.5).

The most likely diagnosis is

a. non-A, non-B hepatitis
b. alcoholic hepatitis
c. Gilbert's syndrome
d. Crigler-Najjar syndrome
e. Wilson's disease

C

The diagnosis of Gilbert's syndrome, a benign, hereditary glucuronyl transferase deficiency, is usually made by exclusion and should be suspected in a patient who has mild, persistent, unconjugated hyperbilirubinemia when 1) there are no systemic symptoms, 2) there is no overt or clinically recognizable hemolysis, and 3) tests of routine liver function are normal. Crigler-Najjar syndrome is associated with much higher levels of unconjugated bilirubin (6-45 mg/dL). The diagnosis of Wilson's disease should be considered in any patient under the age of 40 who has an unexplained disorder of the central nervous system, signs and symptoms of chronic active

hepatitis, unexplained persistent elevations of serum transaminase, acquired hemolytic anemia, or unexplained cirrhosis. Alcoholic hepatitis is associated with variable elevations of serum alkaline phosphatase. Abnormal liver enzymes are characteristic of both alcoholic hepatitis and non-A, non-B hepatitis.

A 39-year-old white female has a 6- to 8-month history of general fatigue, myalgias, arthralgias, nausea, and constipation. She is married, has two children, and runs a successful small business. In addition to her physical complaints, she says that she has been increasingly forgetful. Past medical history includes repair of a torn meniscus 20 years ago and a bilateral tubal ligation 12 years ago. She has been taking antacids regularly for dyspepsia. Her menstrual pattern is undisturbed. A physical examination is unremarkable.

Laboratory Findings

Calcium.....12.7 mg/dL (N 8.4-11.0)
Phosphorus.....2.0 mg/dL (N 3.0-4.5)
Albumin.....4.4 g/dL (N 3.5-5.5)
Chloride.....110 mEq/L (N 95-105)
Serum uric acid.....5.3 mg/dL (N 3.0-8.2)
Serum creatinine.....0.9 mg/dL (N 0.6-1.2)
BUN.....10 mg/dL (N 7-18)
After obtaining repeatedly elevated levels of parathyroid hormone (PTH), you make an appropriate diagnosis.

Optimal treatment for this patient is

a. radiation therapy
b. oral phosphate therapy
c. psychotherapy
d. intravenous plicamycin (Mithracin)
e. surgery

E

This case is a typical presentation for symptomatic primary hyperparathyroidism. The only successful treatment is surgery. Most authorities feel that parathyroidectomy should be performed for patients who are symptomatic, unless there are contraindications or the diagnosis is uncertain. Furthermore, it is appropriate to operate on young persons to avoid lifelong monitoring by time-consuming and expensive tests, particularly since surgical treatment is usually successful and carries a low risk of morbidity and mortality. Medical therapy with intravenous plicamycin is reserved for hypercalcemic emergencies, and oral phosphate therapy is merely a temporizing measure. There is no place for radiation therapy in hyperparathyroidism.

A 67-year-old white female has an intermittent history of sharp, lancinating pains at the head of the third metatarsal. She initially experienced a burning sensation with some occasional numbness of the third toe, and later found that removing her shoe would frequently alleviate the pain. Her physical examination is within normal limits except for tenderness at the head of the third metatarsal in the web space between the third and fourth metatarsals.

The most likely diagnosis is

a. improper shoe fit
b. avascular necrosis of the second metatarsal head (Freiberg's disease)
c. Morton's neuroma
d. metatarsal stress fracture
e. diabetic neuropathy

C

The presentation is that of a Morton's neuroma. The fourth toe is most commonly involved, while the third toe is the next most common site. In diabetic neuropathy, a burning dysesthesia involves the entire foot, has no trigger point, and can be completely unrelated to shoe fit. Stress fractures commonly involve the second and third metatarsals. These fractures can be caused by the repeated stress of long distance walking or running. Stress fracture tenderness is usually localized in the shaft of the mid metatarsal, while improperly fitted shoes will cause a much more

generalized pain within the foot. Freiberg's disease occurs in adolescents and is an avascular necrosis of the second metatarsal head.

Parents can refuse vaccinations to their children- but what's the case of blood/products transfusion in transfusion- dependent kids e.g. thalassemics?
And what's the next step for the attending?
Comments appreciated.

Parents have legal and moral authority to make health care decisions for their children, as long as those decisions do not pose a serious threat to the child's physical well-being. Parents should not be permitted to deny their children medical care when that medical care is likely to prevent substantial harm or suffering. If necessary, the physician may need to pursue a court order in order to provide treatment against the wishes of the parents. Nevertheless, the physician must always take care to show respect for the family's beliefs and a willingness to discuss reasonable alternatives with the family.

fetal abuse- please

Particularly role of courts in emergency situations- the standard references are a bit vague.

US courts have ruled that a child has a legal right to begin life with a sound body and mind. Such a right may create a legal duty, on the part of a pregnant woman, to protect the health of her fetus. Failure to fulfill that duty could subject her to charges of fetal abuse, or render her liable for consequent damage to her child. Pregnant women's refusals of hospitalization, intrauterine transfusion, or surgical delivery have been legally challenged on the grounds of an obligation to the fetus.

A 60-year-old Asian male who has a long-term history of emphysema visits you with complaints of increasing dyspnea on exertion. An examination reveals moderate pedal edema, distention of the jugular veins, mild hepatomegaly, and an S3 gallop that is accentuated by inspiration. The lungs are clear.

The most likely cause of these findings is

a. the syndrome of inappropriate antidiuretic hormone secretion (SIAD
b. hepatic cirrhosis
c. ischemic cardiomyopathy
d. cor pulmonale
e. hepatic vein obstruction (Budd-Chiari syndrome)

Answer is D. All the findings described are consistent with a diagnosis of cor pulmonale with right ventricular failure. While hepatomegaly and edema may be present in hepatic vein obstruction, distention of the jugular veins and a ventricular gallop would be notably absent. Ischemic cardiomyopathy ordinarily affects primarily left ventricular function; isolated right-sided findings, as in this patient, would be unusual. Hepatic cirrhosis may cause hepatomegaly and edema, but would not be expected to produce distention of the jugular veins and a right-sided ventricular gallop. SIADH is associated with some types of pulmonary disease, but does not produce edema.

A 60-year-old man presents with erectile dysfunction. He has been with the same partner for 25 years and notes a gradual decline in his ability to consistently achieve and maintain an erection. He continues to have normal nocturnal erections. His medical history includes long-standing hypertension, and he had a single-vessel coronary artery bypass graft 2 years ago, which alleviated his previous exertional angina. Current medications include an ACE inhibitor and a b-blocker. On physical examination, he has a mildly enlarged prostate gland by digital examination. His serum testosterone concentration is 310 ng/mL (normal 300 to 1200 ng/mL). Repeat testosterone measurement is 350 ng/mL, and serum luteinizing hormone and follicle-stimulating hormone concentrations are normal.

What treatment would you try first in this patient?

(A) Psychologic counseling

(B) Testosterone, 200 mg intramuscularly every 2 weeks

(C) Decreasing the b-blocker dosage

(D) Sildenafil (Viagra®)

Answer is C. The presence of nocturnal erections in this patient strongly suggests that his anatomy is intact for the ability to develop an erection. Thus, central causes like depression and b-blocker therapy are more likely.A serum testosterone level of 310 ng/mL in the afternoon is still compatible with completely normal testicular function, given the normal diurnal variation of serum testosterone levels seen in many men.
Because of the potential to cause myocardial ischemia, sildenafil therapy is risky to use before all other potential therapies have been exhausted.

All of the following statements regarding the epidemiology of HIV infection are correct EXCEPT

(A)the risk of transmission following skin puncture from a needle contaminated with blood from an HIV-infected patient is less than 0.5 percent
(B)most cases of AIDS are now among IV drug users
(C)the risk of transmission from a single donor unit of blood is approximately 1/500,000
(D)most pediatric cases of AIDS arise because of vertical transmission from an infected mother
(E)there is no convincing evidence that saliva can transmit HIV

Answer is B. Among U.S. cases of AIDS, male-to-male sexual contact represents the most frequently reported mode of HIV transmission among persons with AIDS. However, over the past few years, the number of newly reported cases of AIDS among other groups, including IV drug users and heterosexuals, from certain large cities have surpassed the number of newly reported cases among men who had sex with men. The proportion of new cases attributed to IV drug use and heterosexual sex has increased dramatically over the past ten years. There is a small but existent occupational risk of HIV transmission. Large, multi-institutional studies have indicated the risk of a penetrating injury, such as a needlestick from an HIV-infected person, to be approximately 0.3 percent. Risk posed by a mucocutaneous exposure is probably closer to 0.1 percent. Current measures used to screen donors now include p24 antigen testing which has resulted in a further decrease in the risk of being infected from a unit of blood to at most 1 in 450,000 to 1 in 660,000. Pediatric AIDS arises mainly from infants born to mothers who are HIV-infected. The remainder are generally exposed via blood transfusions. Although HIV can be

rarely isolated from saliva, there is no convincing evidence that saliva can transmit HIV infection, either through kissing or other exposures, such as occupationally to health care workers.

A 79-year-old woman presents to your office on three separate occasions with the following average blood pressures: 190/82 mmHg, 192/76 mmHg, 194/78 mmHg. Which of the following is NOT likely to be affected by treating the patient's systolic hypertension?

a. The incidence of myocardial infarction
b. The risk for stroke
c. The incidence of left ventricular failure
d. The risk of hypertensive crisis

The answer is D

The risk of hypertensive crisis

The Systolic Hypertension in the Elderly Program demonstrated that treatment of isolated systolic

hypertension results in a significant decrease in the risk of stroke, the incidence of myocardial infarction, and the incidence of left ventricular failure in persons aged 60 or over. However, such treatment has not been shown to reduce the incidence of hypertensive crisis. Treatment options for isolated systolic hypertension follow the same guidelines as for systolic-diastolic hypertension. Treatment begins with nonpharmacologic therapies, including salt restriction and weight loss. Pharmacologic therapy is initited with diurectics or beta-blockers. Although overly aggressive salt restriction may be hazardous in some older adults, reduction in dietary salt intake in this case is the most reasonable initial choice.

Appendicitis

CBC/diff
SMA 6
Flat and upright of abdomen X-ray (Fecalith in the right lower Q)
UA
Transfer to OR – give 1 g Cefoxitin IV Preop then 3 doses after
NPO
Operation.

Acute Cholecystitis

CBC/diff
SMA 12 with Amylase

Flat and upright of abdomen X-ray (Calcification-air..)

UA

Pregnancy Test (F)

HIDA scan

R Upper Q Scan

IV 1st generation cephalosporin

After stabilization. NPO then Elective Cholecystectomy

Acute Diverticulitis

Acute Left LQA Pain, Fever, Chills, tachycardia

CBC/Diff

UA

Flat and upright of abdomen X-ray

CTSCAN is the imaging procedure of choice.

NPO

Nasogastric tube

IV and hydration

Ampicillin/Gentamicin/Clindamicin or Cefoxitin alone

Intestinal Obstruction of Small Bowel

Flat and upright abdomen X-ray (Differential Air-fluid levels with dilated small bowel)

CBC

SMA 12

NG Tube-suction

IV hydration

Admit to surgery for immediate laparotomy

INJURIES... facts(source CDC)

Males

Males are at least four times as likely as women to die from suicide.
Men 65 and older have the highest suicide rate.
More than three-quarters of school homicide and suicide victims were males.
Compared with women, men are twice as likely to sustain a traumatic brain injury and four times as likely to sustain a spinal cord injury.
Among adults ages 65 and older, motor vehicle-related injury rates are twice as high for men than for women.
Male high school students are less likely than female students to wear seat belts.
Men ages 65 and older are 22% more likely than women to die as a result of a fall.
More than 80% of drownings occur among males.
The pedestrian death rate is twice as high for men as for women.
Boys ages 5 to 9 are at highest risk for dog bite–related injuries.

Females

Women are more likely than men to attempt suicide.
In a national survey, 25% of women reported being raped or physically assaulted by an intimate partner at some time in their lives; only 8% of men reported such an experience.
One in three women injured during a physical assault or rape requires medical care.

Women are more likely than men to be murdered by an intimate partner.
Among adults 65 and older, women are hospitalized for hip fractures three times as often as men.

African Americans

More African Americans ages 15 to 19 die from homicide than from any other cause.
African Americans are among those at greatest risk for injuries from residential fires.
The pedestrian fatality rate for African Americans is nearly twice that for whites.
The drowning rate for African Americans overall is about 1.6 times as high as for whites. For African American children ages 5 to 9, it's 2.5 times as high.
African American high school students are less likely than white students to wear seat belts all the time, putting them at increased risk of motor vehicle–related injuries.
The rate of spinal cord injuries is higher among African Americans than among whites.

Hispanic Americans

Motor vehicle crashes are the leading cause of injury-related deaths for Hispanics; poisonings are second.
The pedestrian fatality rate for Hispanics is 1.77 times higher than for whites.
Homicide is the second leading cause of death for Hispanics ages 15 to 34.

Infants and Young Children

For children ages 1 to 4, motor vehicle injuries are the leading cause of death.
Nearly half of children 4 and younger who died in motor vehicle crashes were riding unrestrained.
Drowning is the second leading cause of injury-related death for children

ages 1 to 4.
In 1999, children under 5 accounted for more than half of all poison exposures.
Children under 5 are among those most at risk for injuries from residential fires.
Head trauma, often the result of violent shaking, is the leading cause of death and disability among abused infants and children.

Children and Adolescents

For children ages 5 to 14, motor vehicle injuries are the leading cause of death.
Only about 6% of children ages 4 to 8 ride in booster seats, the recommended safety seat for this age group.
Nearly two-thirds of children 15 and younger who died in alcohol-related motor vehicle crashes were riding with the drinking driver.
Drowning is the second leading cause of injury-related death among children 5 to 14.
For children ages 10 to 14, suicide is the third leading cause of death.
Between 1980 and 1997, the suicide rate for children 10 to 14 years old increased 109%.
Nearly one-third of bicyclists killed in traffic crashes are children ages 5 to 14.
An estimated 140,000 children are treated each year in emergency departments for traumatic brain injuries sustained while bicycling.
Children 15 and younger accounted for 11% of pedestrian fatalities and 30% of nonfatal pedestrian injuries in 1998.
Children are at increased risk for dog bites; 2.5% of children are bitten each year compared with 1.6% of adults.
Nearly 30% of rapes occur before age 12.

Teens and Young Adults

Homicide is the second leading cause of death for Americans ages 15 to 19.

In 1997, 85% of young homicide victims were killed with guns.
In a 1999 study, 14% of high school students had been in a physical fight on school property at least once in the preceding year.
For Americans ages 15 to 24, suicide is the third leading cause of death.
The risk of motor vehicle crashes is higher among teen drivers than any other age group.
Only 35% of high school students report that they always wear their seat belt.
In 1998, 21% of drivers ages 15 to 20 who died in motor vehicle crashes had blood alcohol concentrations of at least 0.10%.
The percentage of teens who wear bicycle helmets is close to zero.
More than half the people who sustain spinal cord injuries are between 16 and 30 years old.
Among young males, alcohol is a major factor in 50% of drownings.

Older Americans

Per mile driven, adults 65 and older have a higher crash rate than all but teen drivers.
The pedestrian death rate for people 65 and older is higher than for any other age group.
Falls are the leading cause of injury-related death among this age group.
Hip fractures are among the most serious fall-related injuries. Half of older adults who suffer a hip fracture never regain their previous level of functioning.
Older adults are among those at greatest risk for injuries from residential fires.
Adults 65 and older account for nearly 20% of suicides. This age group has had the highest suicide rate since 1933, when reporting of such data began

A chubby baby was borne after an uneventful pregnancy & delivery. Apgar scores & clinical exam are satisfactory, however, the nurse cannot determine the gender. She thinks it's a girl. But on careful examination, penis is seen between fat genital folds & when pulled out, measures 1 cm. So male gender is assigned. You can tell the nurse that -

a) since the baby is fat, this can be considered normal, no tests are necessary
b) hormone studies are necessary
c) genetic studies are necessary
d) there may be some problems with development

B or C

AMBIGUOUS GENITALIA

Diagnostic Tests:

I. Evaluation is usually conducted in consultation
with a neonatologist and a geneticist.
1. Laboratory studies: The most immediate concern
for a neonate with ambiguous genitalia is to
determine whether congenital adrenal hyperplasia
is present.
a. Chromosome analysis: This is the most

appropriate first test. Most laboratories can provide an expedited result within two to three days. Buccal smear provides a rapid answer but are unfortunately highly unreliable

i. Normal 46XX karyotype: The neonate almost always has virilizing congenital adrenal hyperplasia. For confirmation measure:

• 17-hydroxyprogesterone (17-OHP), 17 hydroxypregnenolone (17OHPe) dehydroepiandrosterone (DHEA)
• 24 hour urine for 17-ketosteroids
• Daily serum potassium and sodium
• Serum testosterone

ii. Normal 46XY karyotype: The diagnosis of an incompletely virilized male is extremely complex.

• Testosterone (T) and dihydrotestosterone (DHT)
• Luteinizing hormone (LH) and follicle-stimulating hormone (FSH)
• Human chorionic gonadotropin (HCG)

b. One of the forms of CAH is salt losing. Neonates may develop severe wasting, weight loss, hyponatremia, hyperkalemia, metabolic acidosis and adrenal shock. These signs rarely occur prior to three to four days of age but may not present until one month of age.

2. Pelvic ultrasound should be done to determine
presence or absence of uterus and ovaries.

Which of the following is the most imp risk factor for increased mortality in a 4 month old child with smoking parents?

a)passive smoking
b)no immunizations
c)infant not put in car seat
d)lack of smoke alarm in the house

C

A 24-month-old African-American female whom you have followed for routine well child care and a few episodes of otitis media is brought to the office by her mother for a regular well child visit. The mother is concerned that the child's language development seems to be slower than she remembers with her older children.

Which one of the following would be a cause for concern at this age?

1)She is making sentences of only two or three words
2)She is unable to name pictures on a standardized test, such as the Denver Developmental Screening Test
3)She is unable to correctly recognize three of four colors
4)She is unable to give her first and last name
5)Her total vocabulary includes about 40 words

By Age One

Recognizes name
Says 2-3 words besides "mama" and "dada"
Imitates familiar words
Understands simple instructions
Recognizes words as symbols for objects: Car - points to garage, cat - meows

Between One and Two

Understands "no"
Uses 10 to 20 words, including names
Combines two words such as "daddy bye-bye"
Waves good-bye and plays pat-a-cake
Makes the "sounds" of familiar animals
Gives a toy when asked
Uses words such as "more" to make wants known
Points to his or her toes, eyes, and nose
Brings object from another room when asked

Between Two and Three

Identifies body parts
Carries on 'conversation' with self and dolls
Asks "what's that?" And "where's my?"
Uses 2-word negative phrases such as "no want".
Forms some plurals by adding "s"; book, books
Has a 450 word vocabulary
Gives first name, holds up fingers to tell age
Combines nouns and verbs "mommy go"
Understands simple time concepts: "last night", "tomorrow"
Refers to self as "me" rather than by name
Tries to get adult attention: "watch me"
Likes to hear same story repeated
May say "no" when means "yes"
Talks to other children as well as adults
Solves problems by talking instead of hitting or crying

Answers "where" questions

Names common pictures and things

Uses short sentences like "me want more" or "me want cookie"

Matches 3-4 colors, knows big and little

Which of the following would be most imp risk factor for increased mortality/morbidity in a 5yr old with smoking parents?

a)passive smoking

b)lack of fence around the pool

c)riding a bike without helmet

d)leaving liquor cabinet unlocked

e)lack of smoke alarm in the house

most common cause of death in this group is accidents.an unfenced pool is more common source of accident than bicycle accidents w/out helmet

so i think the ans is B

Just The Facts: Who Is at Greatest Risk for Fire-Related Deaths?

Children 4 and under
Older adults 65 and older
The poorest Americans
African Americans and Native Americans
Persons living in rural areas
Persons living in manufactured homes or substandard housing

(source:www.cdc.gov/ncipc/fact_book

ABCs take priority. Saving only the head will not save the patient.
Hypotension in adults is never caused by an isolated head injury except near death. Look for other injuries including cord injuries.
Physical exam includes complete neurologic exam as well as inspection for evidence of basilar skull fracture (CSF rhinorrhea, Battle's sign, raccoon eyes, hemotympanum), etc.

Low-risk injuries.
Criteria.
Minor trauma, scalp wounds.
No signs of intracranial injury, loss of consciousness.
Treatment. Observation for any sign or symptom of brain injury. Must discharge to a reliable

observer who will continue observation at home.

Moderate-risk injuries.

Criteria.

Symptoms consistent with intracranial injury including vomiting, transient loss of consciousness, severe headache, posttraumatic seizures, amnesia, evidence of basilar skull fracture (CSF rhinorrhea, Battle's sign, raccoon eyes, hemotympanum).

Nonfocal neurologic exam.

Treatment. Observation and "neuro checks"; consider CT; use clinical judgment.

Admit for observation and monitoring.

High-risk injuries.

Criteria. Depressed level of consciousness, focal neurologic signs, penetrating injury of skull or palpable depressed skull fractures.

Approach. Immediate CT, neurosurgical consultation.

Support while awaiting definitive neurosurgical care.

Intubation. Pretreatment with lidocaine 1 mg/kg IV may prevent rise in intracranial pressure (ICP). Hyperventilation to maintain PO2 >90 torrs, PCO2 25 to 30 torrs.

Maintains adequate oxygenation and reduces intracranial pressure.

PEEP relatively contraindicated because reduces cerebral blood flow.

Avoid tight cervical collars. Any pressure on the external jugular veins will increase the ICP.

Maintain normal cardiac output.

If hypotensive from other cause such as multitrauma, hypertonic saline (3% or 7.5%;) may be best IV fluid because stabilizes BP, improves cerebral blood flow, prevents increase in ICP from edema.

If hypertensive, consider labetalol or nitroprusside. Vasodilator such as nitroprusside will increase cerebral blood flow and ICP.

Treating increased ICP.

Hyperventilation as above.

Mannitol 1 g/kg IV over 20 minutes induces osmotic diuresis. (Controversial if patient not

herniating. Consult your neurosurgeon.)
Some suggest furosemide (Lasix and others) 20 mg IV.
Elevate head of bed 30 degrees.
Steroids ineffective in controlling ICP in the trauma setting.
Glasgow coma scale.
Useful in a general sense, but 18% of those with a GCS score of 15 have an abnormal CT scan, and 5% of those with a GCS score of 15 require neurosurgical intervention. The GCS score is especially unreliable in children.
Skull radiographs. Head CT with bone windows generally preferable.
Generally not indicated in adults unless one suspects depressed fracture and cannot palpate skull because of hematoma, etc.
Can have intracranial injury without a skull fracture and vice versa.
May be useful in those up to 7 years of age because a skull fracture can lead to nonunion because of rapid head growth. Use clinical judgment as to severity of injury.
Postconcussive syndrome.
May occur with minor trauma.
Characterized by headache, memory difficulty, attention deficit, personality changes, negative CT (may represent disruption of axonal support structures, axonal stretching).
May have findings on formal neuropsychologic testing.
May last for a year or more.
Treat headache with nonnarcotic analgesia and depression.

Coma score is most useful in triage and in following status. Initial score of <7 indicates a poor prognosis if a cause other than trauma cannot be found and corrected quickly. Assessment should be done frequently and recorded accurately on a flow sheet with times documented.

Approach:

ABCs including cervical spine immobilization if any possibility of trauma.
If hypertension with associated bradycardia, consider increased intracranial pressure.
Intubate to protect airway if no gag reflex.
Check finger-stick glucose and rapidly administer:
Thiamine 100 mg IV prevents Wernicke-Korsakoff encephalopathy.
Do not withold glucose if thiamine not available. A single dose of glucose will not induce Wernicke-Korsakoff encephalopathy.
Glucose 25 to 50 g IV treats hypoglycemia.
Naloxone 2 to 4 ampules of 0.4 mg treats narcotic overdose.
Some will start with 2 mg and then 4 mg if no response.
Make sure to restrain the patient if suspect will precipitate narcotic withdrawal. Recently the routine use of naloxone has been questioned in those patients without evidence of narcotic intoxication. However, it should be considered for use in all patients.
If suspect benzodiazapine overdose (valium, alprazolam, and others).
Flumazenil (Romazicon) 0.2 mg up to 5 mg IV. Do not use flumazenil if suspect concurrent tricyclic overdose or chronic benzodiazapine use. It may precipitate status epilepticus. This should not be routinely administered to the unconscious patient unless there is a clear indication and no contraindication.

Differential Diagnosis of Coma
Coma with no localizing CNS signs can be caused by:
Metabolic insults including hypoglycemia, uremia, nonketotic hyperosmolar coma, Addision's disease, diabetic ketoacidosis, hypothyroidism, hepatic coma.
Children and young adults will often get hypoglycemic and may present with coma after alcohol

ingestion including mouthwash!
Respiratory including hypoxia, hypercapnia.
Intoxication including barbiturates, alcohol, opiates, carbon monoxide poisoning, benzodiazepines.
Infections (severe systemic) including sepsis, pneumonia, typhoid fever.
Shock including hypovolemic, cardiogenic, septic, anaphylactic.
Epilepsy.
Hypertensive encephalopathy.
Hyperthermia (heat stroke), hypothermia.
Coma with meningeal irritation without localizing signs can be caused by meningitis, subarachnoid hemorrhage from ruptured aneurysm, AV malformation.
If focal brainstem or lateralizing signs, can be caused by pontine hemorrhage, CVA, brain abscess, subdural-epidural hemorrhage.
If appear awake but unresponsive:
Abulic state. Frontal lobe function depressed and so may take several minutes to answer question.
Locked-in syndrome. Destruction of pontine motor tracts. Is able to look upward.
Psychogenic state. Unresponsiveness.

Pathophysiology of Coma
Coma can be caused only by:
Bilateral cortical disease.
Reticular activating system compromise.

To Differentiate Between Cortical and Brainstem Lesions
Use calorics - ice water in each ear. Nystagmus refers to the fast return phase. Four possible responses:
Both eyes deviate toward side cold water instilled and have good nystagmus. Patient not comatose.

Both eyes deviate toward cold water; no fast return phase. Brainstem function intact. Coma is caused by cortical problem.

No eye movement despite cold stimuli to both sides, thus no brainstem function (same as absent oculocephalic reflex, or "doll's eyes").

Not necessarily a permanent lesion; may be caused by severe hypothermia or drug overdose.

Movement of only one eye ipsilateral to stimulus, thus intranuclear lesion, which almost always indicates brainstem damage and demands rapid evaluation to determine if a correctable lesion is present.

Pupils.

Generally resistant to metabolic insult.

Remember that a dilated eye may be secondary to topical or systemic drugs.

A dilated pupil in an alert person is not likely attributable to increased intracranial pressure and herniation.

A dilated pupil in an unconscious patient may herald imminent uncal herniation.

Small reactive pupils. Generally metabolic or diencephalic lesion.

Unilateral, dilated, fixed. Third nerve lesion or uncal lesion.

Bilateral pinpoint pupils. Pontine lesion.

Midposition, fixed. Midbrain lesion.

Bilateral large, fixed. Tectal lesion.

Propoxyphene (Darvon and others) can cause coma without pinpoint pupils.

Eyes will deviate toward side of physiologically inactive lesion (CVA) and away from an active lesion (seizure).

5% of the normal population will have anisocoria (asymmetric pupils).

Laboratory Work-up of Coma

CBC, electrolytes, BUN, creatinine, glucose, calcium, magnesium, arterial blood gas, toxic screen, carboxyhemoglobin, liver enzymes.

CT scan and LP.

If suspect meningitis, do not withhold antibiotics while waiting to do an LP. Antibiotics should be started before the patient goes to the CT scanner. Your culture results will not be affected.

A 65-year-old Greek woman visiting her children in Chicago complains of upper abdominal pain. The patient is brought to the family physician, who notices icteric sclera and a mass in the right upper quadrant. CT reveals a 10-cm multiloculated cyst with mural calcification that is compressing the common bile duct. Which of the following statements is correct concerning this clinical situation?

A)Treatment with the antiamebic agent chloroquine is indicated
B)Treatment with an antiechinococcal agent such as albendazole is sufficient
C)The adult parasite resides in the patient's intestine
D)Infection was probably caused by exposure to infected dogs
E)Surgery is contraindicated because of the risk of anaphylaxis from dissemination of infectious material

The answer is D

This patient hails from an area where echinococcal infection is endemic. It is prevalent in areas where livestock is raised in association with dogs. Dogs, which are the definitive hosts, harbor the adult E. granulosus worm and pass eggs in their feces, which can then be ingested by the intermediate hosts, including sheep, cattle, and humans. After ingestion of the eggs, the hatched embryos enter the portal circulation and frequently travel to the liver or lungs. The larvae develop into fluid-filled hydatid cysts from which secondary cysts develop. A slowly enlarging mass ultimately develops. After 5 to 20 years the mass may enlarge to the point where it may cause symptoms, such as those resulting from compression of the bile duct. Leakage of cyst fluid into the biliary tree also can mimic recurrent cholelithiasis; episodic leakage from the cyst can produce a syndrome of fever, pruritus, and urticaria or possibly even fatal anaphylaxis. The presence of daughter cysts within larger cysts and eggshell calcification in the wall of the cyst is essentially pathognomonic for E. granulosus infection and suggests that carcinoma, bacterial or amebic liver abscess, and hemangioma are less likely. Aspiration of the cyst may be conducted carefully for diagnostic purposes. Serology is not specific. Albendazole is not sufficiently effective to be used as monotherapy. Surgery is indicated for such a space-occupying lesion, although the risks of anaphylaxis and dissemination of infectious scolices may be minimized by instilling ethanol into the cyst cavity.

A 28-year-old Egyptian farmer presents with left flank pain. Ultrasonography reveals enlargement of the left ureter and hydronephrosis of the left kidney. Cystoscopy reveals a mass extending from the left ureter into the bladder. Parasitic ova (150 by 50 mm) are noted in the urine and in a biopsy of the ureteral mass. Which of the following statements is correct?

A-Renal failure is likely in the absence of treatment

B-The lesion is not reversible by chemotherapy

C-In the absence of treatment, the patient has an increased risk for transitional cell carcinoma of the bladder

D-The patient is suffering from schistosomiasis

E-The organism causing this problem is spread by fecal-oral contact

The answer is D.

Schistosomiasis represents the clinical manifestation of infection with a trematode (fluke). The urinary tract disease noted in this patient is characteristic of Schistosoma haematobium infection, which is endemic in parts of Africa and the Middle East. The infective stage of this parasite, termed a cercara, penetrates the unbroken skin of a human who comes in contact with contaminated water. After several days the schistosomules (developing schistosomes) travel to the lungs and then to the portal vein, where they mate and migrate to the ureteral venules (for S. haematobium; S. mansoni and S. japonicum migrate to the venules of the mesentery). Eggs are deposited in the bladder and ureters, with mature ova being released into the water, where they hatch into a meracidium that infects the intermediate host, a snail, eventually releasing thousands of cercaria to renew the cycle. Eggs deposited in the ureters and bladder elicit an intense

inflammatory and granulomatous response that may cause functional obstruction. These lesions are reversible with the use of antischistosomal chemotherapy such as praziquantel. As fibrosis ensues, chemotherapy is less effective. The diagnosis is based on the demonstration of the characteristic eggs in the tissues or urine. S. haematobium infection is a predisposing factor for the development of an unusual histologic variant of bladder cancer (squamous cell carcinoma).

Items 1-3

A 45-year-old woman complains of a 9-month history of progressive facial weakness, occasional slurred speech and muscle weakness. She is an administrative assistant at the local university and is now unable to work as a result of her condition. She has a history of hyperthyroidism. Her current medications include an antithyroid preparation. She was hospitalized 2 months ago for respiratory failure although the exact cause of her condition was unable to be determined. Physical examination of the heart, lungs and abdomen are within normal limits. Reflexes and sensation are normal. Electromyography with low frequency repetitive stimulation reveals a decrement in the amplitude of evoked motor responses.

Laboratory studies are shown below:

Serum
Creatinine 0.9 mg/dL
Sodium 139 mEq/L
Potassium 4.3 mEq/L

Chloride 102 mEq/L

Bicarbonate 26 mEq/L

Magnesium 1.9 mEq/L

Erythrocyte sedimentation rate (Westergren) 25 mm/h

1. Which of the following entities should be highly considered in the differential diagnosis of this patient?

(A) Bacterial infection
(B) Extracranial mass lesion
(C) Hypothyroidism
(D) Neurasthenia
(E) Overdose of penicillamine

2. This patient undergoes the edrophonium test. Which of the following results are most likely?

(A) Confirmation of the presence of thymoma
(B) Confirmation of the presence of thyroid disease
(C) Rapid progression of dysphagia symptoms
(D) Rapid progression of slurred speech
(E) Rapid and transient improvement in muscle strength

3. The above test is undertaken and the results reported in the patient's chart. Her symptoms are still present. She undergoes a CT scan of the neck which reveals an anterior mediastinal mass. An

otolaryngologist and a general surgery perform a neck exploration and the anterior mediastinal mass is removed. The specimen is sent for pathological analysis. The most likely finding by the pathologist is

(A) Rheumatoid arthritis
(B) Thymoma
(C) Thymic hyperplasia
(D) Thyroid carcinoma
(E) Thyroid hyperplasia

Answers 1-D, 2-E, 3-C

1.The correct answer is choice D. This patient has evidence of a neuromuscular disorder on the basis of her EMG findings revealing a decrement in the amplitude of evoked motor responses. She also has appropriate classical symptoms of facial and muscle weakness with slurred speech. Hyperthyroidism, not hypothyroidism is part of the differential diagnosis of this condition. Neurasthenia is weakness or fatigue without an underlying cause and is considered a diagnosis of exclusion in this case.

2.The correct answer is choice E. Edrophonium is a short-acting anticholinesterase, which will produce rapid and transient improvement in muscle strength in this patient who likely has myasthenia gravis. False positive tests can also occur in patients with upper motor neuron disease.

3.The correct answer is choice C. The pathophysiology of myasthenia gravis involves specific anti-acetylcholine receptor antibodies at the neuromuscular junction. The thymus is abnormal in 75% of patients. 65% have thymic hyperplasia while 10% have thymoma. Other autoimmune

diseases are found in 10% of patients. The thyroid gland is typically not involved in myasthenia gravis.

You are evaluating a 24-year-old Hispanic female with severe right upper quadrant abdominal pain. Despite a normal gallbladder sonogram, you strongly suspect acute cholecystitis and order a technetium-labeled iminodiacetic acid (TeHIDA) scan.

Which one of the following results is most likely to confirm the diagnosis of acute cholecystitis?

a. Nonvisualization of the gallbladder and bowel
b. Nonvisualization of the gallbladder with normal visualization of the common bile duct and bowel
c. Visualization of the gallbladder delayed more than 2 hours after the ingestion of a fatty meal
d. Visualization of the gallbladder within 60 minutes

Answer is B.
In cholecystitis the radioactive HIDA substance will appear in the bile ducts, but it will not enter the cystic duct or the gallbladder, a finding that indicates obstruction. If the substance enters the

bile ducts but does not enter the small intestine, then an obstruction of the bile duct (usually due to stones or cancer) is suspected.

A 68-year-old white male who lives alone is admitted after having been found by his daughter lying on the basement floor. No one knows for sure how long he had been lying there. He seems confused and is noted to have a tri-malleolar fracture of the right ankle. His only prior medication was ibuprofen, 800 mg 3 times a day which he took for a "sore shoulder."

After admission, you note that he is oliguric with a 24-hour urine output of 320 cc. His blood urea nitrogen (BUN) is 65 mg/dL and serum creatinine is 2.1 mg/dL. On a physical examination which he had only 2 weeks prior to admission, a chemistry profile had noted the BUN as 14 mg/dL and the creatinine as 1.1 mg/dL. Urinalysis shows 1+ protein, occasional white cells, no red cells, and no cellular casts. Urine osmolality is 618, urine sodium is 3 mEq/L, and urine creatinine is 105 mg/dL.

The most likely cause of his oliguria is

a. bilateral cortical necrosis
b. renal toxicity of ibuprofen
c. acute glomerulonephritis

d. decreased renal perfusion

e. acute tubular necrosis

D

The clinical picture described in this question is most consistent with prerenal azotemia and oliguria secondary to decreased renal perfusion from volume depletion or hypotension. The disproportionate elevation of blood urea nitrogen (BUN) over creatinine, the high urine osmolality and low urine sodium concentration, and the urine/plasma creatinine ratio favor this diagnosis, rather than acute tubular necrosis or bilateral cortical necrosis. In the latter condition, 24-hour urine output is often less than 100 cc. The absence of red blood cells and red cell casts in the urine makes acute glomerulonephritis an unlikely diagnosis. Renal insufficiency secondary to NSAIDs is more likely to be renal papillary necrosis or acute interstitial nephritis. Urinalysis results are not consistent with those diagnoses.

A painful thrombosed external hemorrhoid diagnosed within the first 24 hours after occurrence is ideally treated by

a. total hemorrhoidectomy

b. thrombectomy under local anesthesia

c. office cryotherapy

d. office banding

e. appropriate antibiotics

B

A thrombosed external hemorrhoid is described as the sudden development of a painful, tender perirectal lump. Because there is somatic innervation, the pain is intense, and increases with edema. Treatment involves excision of the clots or incision under local anesthesia, mild pain medication, and sitz baths. It is inappropriate to use procedures that would increase the pain, such as banding or cryotherapy. Total hemorrhoidectomy is inappropriate and unnecessary.

A 29-year-old white male who works in a plywood factory is crushed by a press. On examination in the emergency department, you find that six ribs are fractured on the right side of his chest and five on the left. Paradoxical respiratory movement of the right hemithorax is obvious. He is confused, hypoxic, and tachypneic.

Instability of the chest wall in this patient is best managed by

a. use of a volume-controlled ventilator following intubation
b. towel-clip traction of the chest wall
c. strapping the chest
d. placing sandbags against both sides of the chest

A

Generally, external methods of stabilization have been replaced by intermittent positive-pressure, volume-controlled ventilation. Ventilation is continued to the point of apnea, which produces the same sedative effects as apnea resulting from mild alkalosis. As a result, the patient makes no active inspiratory effort, and the flail segment does not undergo paradoxical motion.
Placing sandbags against both sides of the chest and strapping the chest are methods of stabilization that fix the chest wall in a position of expiration and thereby reduce total compliance. Towel-clip traction of the chest partially stabilizes the chest wall in the inspiration position, but is extremely difficult to maintain.
In the evaluation and management of this type of patient, the physician should not let the chest wall injury (with flail chest) divert his attention from possible underlying pulmonary or myocardial injury.

A 76-year-old white male consults you regarding impotence. He describes not only an inability to achieve an erection but also a marked decline in his libido. A serum testosterone level is reported as low.

Which one of the following laboratory studies should be ordered next?

a.Prolactin level
b.Estradiol level
c.FSH level
d.Cortisol level
e.Renal panel

A

In patients with impotence, diminished libido, and decreased testosterone, a prolactin level should be ordered, to rule out a pituitary adenoma.

A young male is brought to the emergency department after having been submerged for a prolonged period in a nearby pond. Cardiopulmonary resuscitation was performed at the scene. The patient is being ventilated by mask and bag upon arrival in the emergency department. A brief examination reveals that the patient has no obvious sites of trauma and is conscious but not communicative. His blood pressure is 90/60, pulse is 120, temperature is 36°C (96.8°F), and respiratory rate is 30. Cardiac rhythm reveals sinus tachycardia. Pulse oximetry reveals oxygen saturation of 83 percent. Which of the following is the best method to reverse the patient's apparent hypoxemia?

A: Administration of sodium bicarbonate
B: Administration of acetazolamide
C: Administration of supplemental oxygen
D: Application of continuous positive airway pressure and administration of supplemental oxygen
E: Administration of supplemental oxygen and endotracheal suction to remove aspirated fluid

The answer is D
Ninety percent of drowning patients aspirate fluid; however, the vast majority aspirate less than 22 mL/kg. Although aspiration of fresh water can produce acute hypervolemia with dilutional hyponatremia and possibly even hemolysis, these are rare occurrences. Aspiration of seawater can cause hypovolemia with ensuing hypernatremia. In the absence of documentation of such an electrolyte problem, no specific therapy is required. Aspiration of water of any type leads to considerable venous admixture (i.e., ventilation-perfusion abnormalities), which can produce hypoxemia. The most important therapeutic maneuvers, after resuscitation on the scene, are to

provide supplemental oxygen, intravenous access, and transportation to a hospital where the patient can be evaluated for adequacy of ventilation, cardiac function, and blood volume. The best way to reverse drowning-associated hypoxemia consists of the application of continuous positive airway pressure (CPAP). CPAP may be combined with mechanical inflation of the lung as needed; mechanical inflation may be particularly effective in those who have aspirated fresh water, which leads to a change in the surface-tension characteristics of pulmonary surfactant. Correction of severe metabolic acidosis with bicarbonate is controversial. Finally, the universal need for corticosteroid therapy and antibiotics is no longer accepted.

Indications for Diagnostic Lumber Puncture...

Absolute Indications
Meningitis
Encephalitis
Meningeal cancer
Guillain-Barré syndrome
Acute demyelinating disorders
Acute disseminated encephalomyelitis
Transverse myelitis
Brainstem encephalomyelitis
Benign intracranial hypertension (pseudotumor cerebri)

Unexplained neurologic disorders

Seizure

Stroke

Polyneuropathy

Dementia

Altered level of consciousness

Possible indications (Depending on the clinical situation)

Multiple sclerosis

Subarachnoid hemorrhage (if CT negative)

Aortic Dissection

history/vitals/focused exam; cardia/abd/lung/CNS

DD:Unstable angina, MI, Aortic aneurysm

CXR poratble

EKG 12 lead

Echo(Trasn Esophageal) would be reasonable test to be done after CXR

(ER setting, getting a CT is difficult CT and other investigation takes longer time).

Arterial catheter for pressure monitoring & also cardiac monitor in view of non specific st-t wave changes

Control BP with SNP IV infusion+ Beta Blocer or Labetolol IV infusion (single agent titrate)

do ABG,CXR,CKMB,Trop I,EKG-Rule out other causes

Prepare for surgery - CBC,Chem7,UA,Gp and Cross Match, Pt ,PTT

CT scan chest

Surgical Consult- (doesn’t help in CCS- still ask for it!!)

If no immediate need for surgery after looking at the Echo-ICU transfer

Rpt CXR and monitor (cost effective)

If surgery indicated; Based on the size, presence of AR etc

ORDER THORACIC AORTIC ANURYSMECTOMY

Uncomplicated MI Approach..

Here is my management for an uncomplicated MI:

So->presentation of chest pain suggestive for MI:

P/E-chest,abdomen,extremities=3 minutes

1)Aspirin chewing

2)O2 mask

3)IV line

4)ECG 12 lead

5)ECG monitoring

6)vitals monitoring

7)cardiac enzymes(CPK-MB,cTnT)

8)pulseoxymetry monitoring

9)Morphine sulphate i.v.

other Labs:CBC with diff

ABG's

Lytes

Chem 7

PT&aPTT
blood type &crossmatching
LFT's
Urinalysis,creatinine,BUN
glucose serum
TSH
imagistic:
CXR
abd plain films
cardiac ECHO

if no inferior MI/no hypotension->nitroglycerin iv

Look for CI to thrombolysis->if no CI->heparin iv
then tpa bolus
if CI to thrombolysis->stenting PTCA call interventional cardio

the patient is stabilised->transfer in ICU
d/c oxygen
adm.methoprolol iv
continue monitoring for 3 days
Diet liquid
Psyllum cysapride to prevent constipation
2'nd day
Tc scintigram-evaluation of affected miocardum
complete P/E
3'rd day continue measures- early ambulation (go to the bathroom)
4'th day non-stress submaximal effort test
discontinuation of monitoring,
transfer in ward room

5'th day D/c of iv medication
propranolol p.o.(chose because of lowcost)
cord-pulmon examination
look for patient immunisation status
if no influenza&pneumo
advise patient to stop smoking &drinking
6'th day begin solid alimentation
7'th day again submaximal treadmill test
discharge
Final recomandations:
diet low salt low cholesterol
continue aspirin indefintite
come back to control in one month
rest at home for 3 months

that cisapride has been disapproved by the FDA. So pick something else, like misoprostol...

A 60-year-old white female is scheduled to have a total abdominal hysterectomy. She is currently in good health, but the general surgeon is concerned because the patient had a pulmonary embolus 10 years ago.

Which one of the following is most effective for prevention of another embolus?

a.No prophylaxis necessary

b.Impedance plethysmography, 36 and 72 hours after surgery

c.Aspirin prophylaxis

d.Full heparinization after surgery

e.Subcutaneous heparin prophylaxis

E

This patient is considered at high risk for a venous thromboembolism because of general surgery, age greater than 40, and previous history of a pulmonary embolus. In numerous clinical trials, heparin, 5000 U subcutaneously 2 hours prior to surgery, followed by 5000 U subcutaneously every 8 to 12 hours until the patient is ambulatory, has statistically reduced the incidence of deep vein thrombosis. Full heparin therapy is not necessary. Aspirin is not effective, and impedance plethysmography would not prevent thrombosis.

A 25-year-old white male comes to see you for evaluation of a "white lesion" which he found several days ago with toothbrushing. The lesion is located on the mucosa of the right cheek, close to the first lower molar. The patient denies any bleeding or pain. He has smoked an average of 2 cigarettes a day for the last 10 years. He now works as a nursing aide in a hospital. There is no family history of malignancy involving the oral cavity. Inspection shows a circular 4 mm lesion that appears as a thin, white, and translucent film on the normal mucous membrane.

At this time, you should

a.refer the patient to an oral surgeon
b.consult with an otorhinolaryngologist
c.perform a biopsy
d.palpate the lesion digitallyA 25-year-old white male comes to see you for evaluation of a "white lesion" which he found several days ago with toothbrushing. The lesion is located on the mucosa of the right cheek, close to the first lower molar. The patient denies any bleeding or pain. He has smoked an average of 2 cigarettes a day for the last 10 years. He now works as a nursing aide in a hospital. There is no family history of malignancy involving the oral cavity. Inspection shows a circular 4 mm lesion that appears as a thin, white, and translucent film on the normal mucous membrane.

At this time, you should

a.refer the patient to an oral surgeon
b.consult with an otorhinolaryngologist
c.perform a biopsy
d.palpate the lesion digitally

D

The characteristics of the lesion do not suggest malignancy. At this stage, digital palpation of the lesion will probably not reveal any thickening. Even though the four options presented are "acceptable routes of management," the physician should take a good history, perform a thorough

physical examination-particularly a digital palpation of the lesion in this case-and formulate a clinical impression which will dictate the next logical step of action.
In the absence of thickening of the lesion on palpation, this thin, early lesion requires only a warning and a biopsy is not necessary. Close follow-up observation is however recommended. This aspect of continuity of care cannot be overemphasized for the family physician.

A young male is brought to the emergency department after having been submerged for a prolonged period in a nearby pond. Cardiopulmonary resuscitation was performed at the scene. The patient is being ventilated by mask and bag upon arrival in the emergency department. A brief examination reveals that the patient has no obvious sites of trauma and is conscious but not communicative. His blood pressure is 90/60, pulse is 120, temperature is 36°C (96.8°F), and respiratory rate is 30. Cardiac rhythm reveals sinus tachycardia. Pulse oximetry reveals oxygen saturation of 83 percent. Which of the following is the best method to reverse the patient's apparent hypoxemia?

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Ninety percent of drowning patients aspirate fluid; however, the vast majority aspirate less than 22 mL/kg. Although aspiration of fresh water can produce acute hypervolemia with dilutional hyponatremia and possibly even hemolysis, these are rare occurrences. Aspiration of seawater can cause hypovolemia with ensuing hypernatremia. In the absence of documentation of such an electrolyte problem, no specific therapy is required. Aspiration of water of any type leads to considerable venous admixture (i.e., ventilation-perfusion abnormalities), which can produce hypoxemia. The most important therapeutic maneuvers, after resuscitation on the scene, are to provide supplemental oxygen, intravenous access, and transportation to a hospital where the patient can be evaluated for adequacy of ventilation, cardiac function, and blood volume. The best way to reverse drowning-associated hypoxemia consists of the application of continuous positive airway pressure (CPAP). CPAP may be combined with mechanical inflation of the lung as needed; mechanical inflation may be particularly effective in those who have aspirated fresh water, which leads to a change in the surface-tension characteristics of pulmonary surfactant. Correction of severe metabolic acidosis with bicarbonate is controversial. Finally, the universal need for corticosteroid therapy and antibiotics is no longer accepted.

1. which is the cost effective screenig for DM in high
   risk patients?
   oral 50g glucose test
   GTT
   oral 75g glucose test.

2. baby born from mother with GDM is more likely to have which one as a longtrem complication

1. obesity

2. glucose intolerenc

3.type2 diabetes in adolescent period

4.hypoglycemia

3. Which of the following is NOT used in the initial management of GDM?

A. proper diet

B. exercise

C. insulin

D. oral hypoglycemics

4. What is the incidence of gestational diabetes mellitus (GDM) in pregnancy?

A. <1%

B. 3% to 5%

C. 5% to 10%

D. 12% to 15%

5. Which group of women is least likely to develop GDM?

A. Native Americans

B. African Americans

C. Latinos

D. Whites

6 The pathologic defect in GDM is summarized as:

A. a diminished compensatory response to the increased insulin resistance commonly associated with pregnancy.

B. a significantly faster first phase response of insulin release in the presence of glucose.

C. answers A and B are both correct

D. answers A and B are both false

7. Which maternal risk factor is an important predictor of GDM?

A. younger than age 25

B. previous pregnancies

C. obesity

D. no family history of diabetes mellitus

8. The American College of Obstetrics and Gynecology recommends that pregnant women at low risk for GDM undergo a modified glucose tolerance test:

A. when pregnancy is confirmed.

B. at the beginning of each trimester.

C. between weeks 24 and 28.

D. between weeks 30 and 34.

9.Which of the following is a neonatal complication of GDM?

A. low–birth-weight infants

B. 90% chance of neonatal hyperglycemia

C. increased instance of hyperbilirubinemia and polycythemia

D. a decreased risk of congenital malformation

10. What percent of women with GDM will ultimately develop DM?

A. 25%

B. 50%

C. 75%

D. 100%

1-1, 2-1, 3-D, 4-B, 5-B, 6-D, 7-C, 8-C, 9-A, 10-B

Gestational diabetes(GDM) is defined as glucose intolerance of variable degree with onset or first recognition during the present pregnancy. It can be screened by drawing a 1-hour glucose level following a 50-g glucose load, but is definitively diagnosed only by an abnormal 3-hour OGTT following a 100-g glucose load.

Importance

The growth and maturation of the fetus are closely associated with the delivery of maternal nutrients, particularly glucose. This is most crucial in the third trimester and is directly related to the duration and degree of maternal glucose elevation. Thus, the negative impact is as highly diverse as the variety of carbohydrate intolerance that women bring to pregnancy.

For the mother with GDM there is a higher risk of hypertension, preeclampsia, urinary tract infections, cesarean section, and future diabetes. Many of the problems associated with overt diabetic pregnancies can be seen in infants of gestational diabetic pregnancies, such as macrosomia, neural tube defects, neonatal hypoglycemia, hypocalcemia, hypomagnsemia, hyperbilirubinemia,birth trauma, prematurity syndromes, and subsequent childhood and adolescent obesity.

Prevalence

The prevalence of GDM varies worldwide and among different racial and ethnic groups within a country. The variability is partly because of the different criteria and screening regimens(i.e., not all pregnant women are screened). Studies using a 100-g 3-hour OGTT and either the criteria of the National Diabetes Data Group(NDDG) or of Carpenter and Coustan have found prevalence

rates of 1.4% to 12.3% in the United States, respectively.

Pathophysiology

Gestational diabetes is pathophysiologically similar to type II diabetes. Approximately 90% of the persons identified have a deficiency of insulin receptors(prior to pregnancy) or a marked increase in weight that has been placed on the abdominal region. The other 10% have deficient insulin production and will proceed to develop mature-onset insulin-dependent diabetes.

HPL blocks insulin receptors and increases in direct linear relation to the length of pregnancy. Insulin release is enhanced in an attempt to maintain glucose homeostasis. The patient experiences increased hunger due to the excess insulin release as a result of elevated glucose levels. This insulin release further decreases insulin receptors due to elevated hormonal levels.

Diagnostic Criteria and Screening Procedures

The traditional method of screening for GDM is to assess risk factors: age, prepregnancy weight, family history of diabetes in a first-degree relative, previous large baby, and previous perinatal loss. Unfortunately, screening based solely on risk factors will only identify approximately 50% of women with GDM.

Glucosuria is a common finding in pregnancy due to increased glomerular filtration and is therefore unreliable as a diagnostic finding.

The ADA(American Diabetes Association) recommend that all pregnant women, who have not been identified with glucose intolerance earlier in pregnancy, be screened with a 50-g 1-hour GCT between 24 and 28 weeks of pregnancy. Such test can be performed at anytime of the day and with disregard to previous meal ingestion. A value equal to or above 140mg/dL should be

used as the threshold level and indicates the need for a 100-g 3-hour OGTT. For the OGTT, the patient is fasting and receives 100-g of glucose after a fasting glucose level is obtained. A blood sample is taken every hour for 3 hours. The patient is advised to sit quietly during the test to minimize the impact of exercise on glucose levels.

The glucose values used to detect gestational diabetes were first determined by O'Sullivan (1964) in a retrospective study designed to detect risk of developing type II diabetes in the future. The values were set using venous whole blood and required 2 values reaching or exceeding the value to be positive. Subsequent information has led to alteration in O'Sullivan's criteria. For example: when methods for blood glucose determination changed from the use of whole blood to venous plasma samples, the criteria for GDM were also changed once whole blood glucose values are lower than plasma levels due to glucose uptake by hemoglobin (NDDG,1979).

Since the adoption of the NDDG criteria, more specific glucose oxidase or hexokinase tests for glucose determination have replaced older methods, and new threshold values have been calculated by Carpenter and Coustan. Sacks and co-workers also have shown that correction of the O'Sullivan's cutoffs may be necessary and suggested new cutoff values in 1989

If one abnormal value is seen during the 100-g 3-hour OGTT it is recommended that the test be repeated approximately 1 month later. There is growing evidence that 1 abnormal value is sufficient to make an impact on the health of the fetus and is now the criterion used by most clinicians to initiate treatment. In a study of 106 women with one abnormal value on the OGTT, 34% were diagnosed with GDM when the test was repeated 1 month later, emphasizing the importance of repeat testing when only one abnormal value is found.

OBS.: If GDM and fetal macrosomia begin to develop in the first trimester, then a diagnostic test to identify women at risk for GDM and to predict infants at risk for macrosomia should be accurate in the first trimester.

Medical Management

The reason for lowering the glucose level to a normoglycemic one is to prevent diabetic complications. The goal of medical management of women with GDM, therefore, is to prevent perinatal morbidity and mortality by normalizing the level of glycemia and other metabolites(i.e., lipids and amino acids) to the levels of nondiabetic pregnant individuals.

Dietary Therapy

Nutritional counseling is the mainstay of therapy for the gestational diabetic woman. The optimal dietary prescription would be one that provides the calories and nutrients necessary for maternal and fetal health, results in normoglycemia, prevents ketosis, and results in appropriate weight gain.

One of the difficulties with dietary prescription for women with GDM is the difference between lean and obese women. Obese women with GDM may benefit from a low calorie diet and weight reduction to reverse the metabolic disturbances, but proper nutrition is needed to assure fetal growth and development.

Jovanovic and Peterson found the following diet to result in euglycemia: 30kcal/kg/24h present pregnant weight for normal-weight women, 24kcal/kg/24h for overweight women (120%-150% ideal body weight), 12 to 15 kcal/kg/24h for morbidly obese women (>150% ideal body weight), and 40kcal/kg/24h for underweight women(<80% ideal body weight). They recommend that the diet be composed of 40% to 50% carbohydrate, 20% to 25% protein, and 30% to 40% fat (polyunsaturated).

The patient checks her glucose 4 times daily (eg., fasting,and 1-hour postprandial breakfast, lunch, dinner). The desired values are a fasting of <90mg/dL and a 1-hour <130mg/dL. The average glucose levels should be~90. After she has obtained a good understanding of her diet and the glucose values are in the desired range, she can decrease the frequency of testing to 3 days per

week chosen randomly.

Insulin Therapy

If diet is not successful in maintaining relative euglycemia, then insulin therapy is recommended. To identify the women who will require insulin, circulating glucose levels should be monitored at frequent intervals. The ADA and ACOG(American College of Obstetricians and Gynecologists) recommend glucose measurements be taken both fasting and after meals to 1 to 2-week intervals. Insulin therapy should be initiated if the fasting glucose levels exceed 105mg/dL and/or if the 2-hour postprandial levels exceed 120mg/dL on two or more occasions within a 2-week interval.

Several centers, however, use the 1-hour time point because it reflects the peak glycemic response to a meal. Two studies have found that the 1-hour postprandial glucose level was a better predictor of infant birth weight than the fasting level. For this reason, when the fasting blood glucose level is 90mg/dL or more, or the 1-hour postprandial glucose is 120mg/dL or more on two or more glucose measurements within 1 or 2 weeks, then insulin therapy is initiated. Several regimens are possible for insulin therapy. Jovanovic and Peterson suggest the regimen.

Exercise Therapy

Cardiovascular conditioning or aerobic exercise has both acute and long-term effects on insulin sensitivity, insulin secretion, and glucose metabolism. Because exercise is associated with a decrease in blood glucose concentration both acutely and after a training program and exercise training with weight control or reduction is associated with lower fasting and postprandial insulin concentrations and apparent increases in insulin sensitivity, regular exercise may be useful in the treatment or prevention of GDM.

There are many other potential benefits of exercise training and increased cardiorespiratory fitness, such as improvement in cardiovascular risk factors and the prevention or reduction of

cardiovascular complications in people with diabetes.

Recognizing the importance of physical activity, the Third International Workshop-Conference on Gestational Diabetes has recommended exercise as a treatment modality for GDM in women who do not have a medical or obstetric contraindication for an exercise program.

Obstetric Management

Antepartum Care

Surveillance for fetal well-being should begin between 28 and 32 weeks. Methods of fetal surveillance may include fetal kick counts, the nonstress test(NST), the contraction stress test (CST), and the biophysical profile. Signs of fetal compromise include the following: decreased fetal movement, a nonreactive NST, a positive CST and a poor biophysical profile.

The frequency and timing of fetal surveillance depend on the severity of the disease and the degree of glycemic control. Frequent (every 4 to 6 weeks) ultrasound examinations to assess fetal growth should be performed.

In the case of abnormal fetal testing, the practioner should assess gestational age and, if the fetus is found to be mature, should proceed to delivery. If the fetus is intermediate in maturity, amniotic fluid assessment for pulmonary maturity may assist in the decision regarding whether delivery should be effected. If the fetus is immature, further testing such as contraction stress tests or hospitalization with continuous fetal heart rate monitoring is advised.

Preterm labor is increased in patients with diabetes and they should be treated with magnesium sulfate as the initial tocolytic agent because the beta mimetics markedly influence glucose control. Corticosteroids increase maternal glucose levels, and this therapy may consist of continuous insulin infusion in certain cases.

Intrapartum and Postpartum Management

Induction of labor is recommended at 38 weeks in patients with poor glucose control and macrosomia. Insulin-requiring diabetics should be induced at 40 weeks' gestation if spontaneous labor has not occurred.

Induction of labor may be attempted if the fetus is not excessively large and if the cervix is capable of being induced(i.e., if the cervix is soft, appreciably effaced, and somewhat dilated).

The possibility of shoulder dystocia in the macrosomic infant of a mother with diabetes must be considered; cesarean section may be indicated to avoid the trauma of a delivering of a large infant(>4000g). Euglycemia should be maintained during labor.

Prognosis

Women diagnosed with gestational diabetes have an increased risk of developing diabetes mellitus in the future. If they require insulin for their pregnancy, there is a 50% risk of diabetes within 5 years. If dietary control has been sufficient, a 60% risk of developing diabetes mellitus within 10-15 years still persists.

For this reason, all gestationally diabetic patients should have a 75-g 3-hr glucose tolerance to evaluate for preexisting diabetes. If the 1-hr value is high, it represents decreased insulin capacity, whereas an elevated 3-hr value reflects decreased insulin receptors. In the former, limiting simple sugars in the diet should become a lifetime goal. In the latter, weight loss with increased abdominal musculature should significantly reduce the increased risk of diabetes.

according to blue print of obgy,
50 % of GDM during pregnancy will experience gdm in subsequent pregnancy and 25-35% will go on to develop overt dm within 5 years...

Nonbilious Vomiting in a 26 day-old...management?

Chief Complaint:

Vomiting

History of the Present Illness:

A 26 day-old white female presents with a history of nonbilious vomiting for the past two days. The mother states that the patient has thrown up all of her feedings during this time. She has also noticed a decrease in urine output with only one wet diaper in the past 24 hours. Appetite is good and the child seems to be very hungry today. There has been one bowel movement in the past two days. There is no history of fever, rash, congestion, cough, or irritability. The sleep pattern has been unchanged. There are no other family members who are ill at home. Past medical history reveals this patient to be the first born product of an uncomplicated full term pregnancy and spontaneous vaginal delivery.

Physical Examination:

Vital signs are Pulse: 140 beats/minute, respirations: 36 breaths/minute, temperature: 98.3° F (rectal), and weight: 3.9 kg. General impression upon entering the room is of a non-toxic appearing white female who has just vomited a small feeding. The anterior fontanel is slightly depressed. Tympanic membranes are normal in appearance. Nares are clear without congestion. The oral mucosa is slightly dry, pink and without exudates. Neck is supple without adenopathy or

meningeal signs. Chest is clear, with normal heart sounds. Abdomen is soft nontender without palpable masses. However, serial physical exam reveals a visible mobile mass which traverses the abdomen in approximately one minute. The mass begins in the left quadrant and moves to the right towards the midline (see photographs). The mobile mass recurs about every 3-5 minutes and is more pronounced after a feeding. Genitalia and extremities are normal. Skin shows no rash or cyanosis.

Laboratory analysis:

Complete Blood Count: WBC: 9.0, HCT: , HGB:12.5 g/dl; Chemistry: Sodium: 134 mmol/l, Potassium: 5.1 mmol/l, Chloride: 95 mmol/l, C02: 31 mmol/l, BUN: 15 mg/dl, GLU: 71 mg/dl, CR: 0.4 mg/dl.

Diagnosis:

Hypertrophic Pyloric Stenosis

Discussion:

Epidemiology

Hypertrophic Pyloric Stenosis (HPS) is a common condition of young infants with an incidence of 1 in 250 live births1. Males are afflicted four times more frequently than females. Firstborn males are prone to developing HPS whereas firstborn females are not. A positive family history is commonly present. Up to 20% of sons and 7% of daughters may be afflicted if the mother has had HPS, compared with 5% of sons and 2.5% of daughters when the father is the affected

parent2.

Pathophysiology

The classic picture of HPS results from hypertrophy of the circular musculature surrounding the pylorus causing severe constriction with subsequent gastric outlet obstruction and hyperperistalsis of the stomach. Although in the vast majority of cases HPS develops postnatally in a progressive manner, it has been documented in the newborn at birth3. This early occurrence has been cited as evidence that HPS may have a congenital rather than acquired etiology. A genetic defect with lack of nerve supply to the circular muscle and decreased levels of nitric oxide synthetase, an enzyme that relaxes smooth muscle, has been postulated as a possible underlying basis for the disorder4.

Clinical Findings

The diagnosis of HPS should be considered in any young infant who presents with nonbilious projectile vomiting5-9. However projectile vomiting may not be present early in the presentation since it usually develops over several days. The classical presentation is a 2-6 week otherwise healthy infant with nonbilious projectile vomiting after feeding5,6. The infant appears hungry and will readily accept another bottle with subsequent postprandial emesis, often within 5-10 minutes. The degree of dehydration and electrolyte imbalance on presentation is variable, but may require rapid intervention depending upon the duration of symptoms. On physical exam, the diagnostic features of HPS include a visible peristalsis (Figure 2) and a palpable pyloric bulb or "olive". The peristaltic gastric wave may not be obvious if the stomach remains empty7. The olive is reported to be palpable in up to 85% of patients and may be found on gentle physical examination in the area of the epigastrium towards the right upper quadrant9. Success in palpating the olive is dependent on the thickness of the hypertrophied pylorus, the condition of the stomach at the time of exam (full vs. empty), and the skill of the examiner in obtaining a gentle exam. Placing the infant on his abdomen in the prone position and gently palpating upward in the right epigastrium is a recently revived technique which may improve detection10.

The usual presentation of HPS is less clear however, and the diagnosis often is confirmed with ancillary diagnostic imaging studies (see below). Persistent severe vomiting results in the loss of hydrogen and chloride ions, which are present in large amounts in gastric secretions. Additionally, the kidneys compensate by conserving sodium and wasting potassium in response to the volume loss from vomiting. Thus laboratory abnormalities, when present, typically show a hypochloremic, hypokalemic metabolic alkalosis1,9.

Differential Diagnosis/Diagnosis

Although most etiologies are self-limited and benign, the differential diagnosis of emesis in the newborn period (or during early infancy) is broad and deserves consideration (see table9). Disorders which may be commonly confused with HPS include poor feeding technique, gastroesophageal reflux, gastroenteritis and pylorospasm7. The diagnosis of HPS is confirmed on physical exam with the classical physical findings noted above. When these are present, further diagnostic studies are unnecessary. In cases where the physical findings are not diagnostic, a period of observation is warranted with serial examinations and feeding the infant to watch for projectile vomiting. If the infant appears dehydrated, fluid resuscitation and laboratory analysis to guide therapy is indicated. Children with protracted symptoms may present with severe dehydration and require aggressive resuscitation and evaluation for sepsis. A child with mild symptoms of recent onset who, after observation, is able to tolerate PO, may be discharged with close follow-up to re-evaluate the course of the illness. For those without diagnostic physical findings, yet are observed to have persistent, nonbilious projectile vomiting, further workup with diagnostic imaging is indicated.

Diagnostic Imaging

When physical findings suggest but do not substantiate HPS, the diagnosis is confirmed with either barium swallow, which shows gastric outlet obstruction (elongated pyloric channel "string sign") or ultrasonography (US). The latter, now almost universally available, is generally

preferred because it is noninvasive and does not carry the risks of aspiration. However preferences for using US versus barium swallow may be institutionally based depending on cost and availability of resources. Ultrasound characteristically shows a target or bulls-eye lesion. Although the sonographic criteria for the diagnosis of HPS are generally accepted (pyloric muscle hypertrophy on both cross-sectional (overall diameter >8mm , wall thickness >3mm), and longitudinal images (canal length >15mm)3, there is some controversy in the relative utility of these measurements. There is evidence to suggest that the width (wall thickness) of the pylorus (>3.0 mm) is the most reliable sonographic measurement. However, in one series, up to 26% with a pyloric width between 2.0 and 3.0 mm were shown to have HPS as confirmed by a contrast study11. Consequently, babies in this equivocal zone are either observed with follow-up US examinations during conservative management, or a barium swallow is performed immediately after the initial US12.

Management

Emergency Department management consists of keeping the child NPO, replacing fluid and electrolyte deficits with an initial fluid bolus followed by maintenance fluids and obtaining early surgical consultation. Definitive treatment is elective pyloromyotomy1,2.

Clinical Pearls

1. Clinical suspicion of Hypertrophic Pyloric Stenosis can be heightened with serial exams and observing the child after oral fluid challenges for persistent nonbilious projectile vomiting.

2. The diligent examiner may see gastric peristaltic waves periodically traversing the abdomen from the left quadrant to the midline as seen in the photographs.

3. Palpation of the "olive", although sometimes difficult, is facilitated by examining the patient in the prone position, with an empty stomach, either immediately after emesis, or after emptying the stomach with a nasogastric tube.

4. Use normal saline for fluid boluses as lactated ringers solution may exacerbate or delay resolution of the alkalosis. Add supplemental potassium to maintenance fluids once intravascular volume had been restored.

5. Correction of electrolyte imbalance should occur prior to surgery, thus emergent surgery is contraindicated in the dehydrated, hypokalemic, hypochloremic alkalotic infant

An obviously intoxicated 50-year-old white male is brought to the emergency department after the car he was driving hit a telephone pole. He has a fracture of the femur, and is confused and uncooperative. He is hemodynamically unstable. Initial physical examination of his abdomen does not indicate significant intra-abdominal injury.

Which one of the following would be best for determining whether laparotomy is needed?

a.Peritoneal lavage
b.Contrast duodenography
c.Ultrasonography of the abdomen
d.An MRI scan of the abdomen
e.A CT scan of the abdomen

A

Physical examination of the abdomen is often unreliable for detecting significant intra-abdominal injury, especially in the head-injured or intoxicated patient. In a hemodynamically unstable patient with a high-risk mechanism of injury and altered mental status, peritoneal lavage is the quickest, most reliable modality to determine whether there is a concomitant intra-abdominal injury requiring laparotomy. Computed tomography of the abdomen and contrast duodenography may complement lavage in stable patients with negative or equivocal lavage results, but in an unstable or uncooperative patient these studies are too time-consuming or require ill-advised sedation. Ultrasonography may also complement lavage in selected patients, but its usefulness is limited in the acute situation. Magnetic resonance imaging is extremely accurate for the anatomic definition of structural injury, but logistics limit its practical application in acute abdominal trauma.

A 72-year-old white farmer presents to your office with an enlarging raised lesion on the dorsum of his hand. It appears to be arising from an area of actinic keratosis.

Due to its location you suspect which one of the following?

a.Squamous cell carcinoma

b.Psoriatic plaque

c.Malignant melanoma

d.Keratoacanthoma

e.Basal cell carcinoma

A

Squamous cell carcinoma is often seen on the dorsum of the hand, and may arise from an area of actinic keratosis. Although basal cell carcinoma and malignant melanoma are sunlight-related diseases, they are not often found on the dorsum of the hand and do not arise from actinic keratoses; this is also true of keratoacanthoma and psoriatic plaques.

While repairing a window, a 42-year-old white male suffers a puncture laceration to the palm, transecting the superficial flexor tendon of the ring finger with no other significant injury. To diagnose this tendon injury you should

a.observe the posture of the fingers of the supinated hand on the examination table

b.explore the wound using a bright light while an assistant sponges the wound dry

c.passively hyperextend the other fingers and ask the patient to actively flex the affected finger

d.ask the patient to flex the ring finger while resistance is applied to the volar surface of the distal phalanx

C

The injury described in this question is easily overlooked by the uninitiated. The intact superficial flexor tendon flexes the proximal interphalangeal joint independently when deep flexor function is inhibited, as it would be by passive hyperextension of the other fingers. Applying resistance to the volar surface of the distal phalanx would test deep flexor tendon function. Posture of the fingers may not be affected by this injury. Exploration of the palm should be done with a tourniquet, and is not generally done by family physicians.

A patient complaining of unilateral decreased vision is noted to have equal pupils in dim light. When you shine a bright penlight into the unaffected eye both pupils constrict briskly, but when you swing the light into the affected eye both pupils dilate.

This is a sensitive diagnostic indicator of which one of the following?

a.Optic nerve lesion

b.Anisometropia

c.Early glaucoma

d.Malingering

e.Cataract formation

A

It is helpful to decide whether patients with visual loss have a disease process involving structures of the globe or of the optic nerve and its central radiations. If loss of vision is secondary to an optic nerve lesion, there will be an afferent pupillary defect on the symptomatic side, demonstrated by the swinging light test. This failure to sustain pupillary constriction is sometimes referred to as the Gunn pupil sign. Visual loss of functional cause or that related to ocular disease rarely affects the pupillary light reflex. In elderly patients the cause may often be infarction of the optic nerve due to temporal arteritis, arteriosclerosis, or emboli. In young adults optic neuritis is often associated with multiple sclerosis.

A 23-year-old woman who was the driver of a car struck in the rear by another car while she was stopped at a red light presents to the emergency department with neck pain as well as discomfort

in the axilla, upper arm, elbow, dorsal forearm, and index and middle fingers. Coughing exacerbates the pain. Neurologic examination reveals weakness in the right second and third fingers, forearm, and wrist. The right triceps reflex is diminished. The most likely diagnosis in this case is

A syringomyelia
B cervical sprain
C thoracic outlet syndrome
D cervical disk herniation
E brachial plexopathyA 23-year-old woman who was the driver of a car struck in the rear by another car while she was stopped at a red light presents to the emergency department with neck pain as well as discomfort in the axilla, upper arm, elbow, dorsal forearm, and index and middle fingers. Coughing exacerbates the pain. Neurologic examination reveals weakness in the right second and third fingers, forearm, and wrist. The right triceps reflex is diminished. The most likely diagnosis in this case is

A syringomyelia
B cervical sprain
C thoracic outlet syndrome
D cervical disk herniation
E brachial plexopathy

The answer is D
Herniation of a lower cervical disk may be due to trauma, especially in the setting of neck

hyperextension. If the disk herniates laterally, it generally will compress the nerve route exiting the lower of the two vertebrae that account for the intervertebral space. For example, if the disk between the fifth and sixth cervical vertebrae herniates, the full syndrome will be characteristic of a C6 radiculopathy: pain in the trapezius, shoulder, radial forearm, and thumb; absent biceps reflex; and preserved triceps reflex. A C7 radiculopathy caused by a disk protruding between the sixth and seventh cervical vertebrae will produce the following: pain in the shoulder blade, pectoral and medial axillary region, upper arm, elbow, dorsal forearm, and index and middle fingers; paresthesia and sensory loss in the second and third fingers or the tips of all the fingers; weakness in forearm and wrist extension as well as hand grip; and a preserved biceps reflex but a diminished triceps reflex. Coughing and sneezing often exacerbate the pain caused by a herniated cervical disk. Unlike the lateral disk syndromes mentioned above, a disk that herniates centrally may be painless but cause symptoms in the lower extremities.

A 28-year-old African-American male is hemorrhaging massively from multiple injuries sustained in an automobile accident. He has responded only transiently to 8 liters of lactated Ringer's solution started by paramedics in the field and continued in the 20 minutes since his arrival in the emergency department. His blood pressure is 60/40 mm Hg. A surgeon is preparing for emergency abdominal exploration.

While the operating room is being prepared and the anesthesiologist is traveling to the hospital, you should administer

a.calcium bicarbonate

b.dopamine

c.type O whole blood

d.type-specific saline crossmatched blood

e.additional lactated Ringer's solution until fully crossmatched blood is available

D

When blood is administered, fully crossmatched blood is always preferable, but this takes an hour or longer. In patients with severe hemorrhage, type-specific saline crossmatched blood is usually available in less than 10 minutes and is the first choice for patients in life-threatening shock, in spite of the possibility of minor antibodies. If type-specific blood is unavailable, type O packed red blood cells are indicated. This patient is severely volume-depleted and vasopressors are not indicated, nor is there any reason to give calcium supplements

A 32-year-old farmer comes to your office because of an upper respiratory infection. While he is there he points out a lesion on his forearm that he first noted approximately 1 year ago. It is a 1-cm asymmetric nodule with an irregular border and variations in color from black to blue. The patient says that it itches and has been enlarging for the past 2 months. He says he is so busy that

he is not sure when he can return to have it taken care of.

In such cases the best approach would be to

a.freeze the site with liquid nitrogen
b.perform an elliptical excision as soon as possible
c.use electrocautery to destroy the lesion and the surrounding tissue
d.perform a shave biopsy, with a recheck in 2 months for signs of recurrence
e.perform a punch biopsy and have the patient return if the biopsy indicates pathology

B

Despite this individual's busy schedule, he has a potentially life-threatening problem that needs proper diagnosis and treatment. Though an excisional biopsy takes longer, it is the procedure of choice when melanoma is suspected. After removal and diagnosis, prompt referral is essential for further evaluation and therapy. A shave biopsy should never be done for suspected melanoma, as this is likely to transect the lesion and destroy evidence concerning its depth, thus making it difficult to assess the prognosis. A punch biopsy should be used only with discretion in suspected melanoma, when the lesion is too large for complete excision, or if substantial disfigurement would occur. Since this may not actually retrieve cancerous tissue from an unsampled area of a large lesion that might be malignant, it would be safest to refer such a patient. Neither cryotherapy nor electrocautery should be used for a suspected melanoma.

A 42-year-old white female has a 5.0x7.0-mm pigmented lesion removed from the skin of the dorsal thorax by excisional biopsy. The width of the surgical margins is 4.0 mm and the excision extends to the subcutaneous fat. There are no satellite lesions, no palpable regional lymph nodes, and no distant metastases. The pathology report reads, "Malignant melanoma, 0.65 mm thick by Breslow measurement technique. All specimen margins are free of tumor."

Which one of the following is most appropriate at this time?

a.No further treatment
b.Wide reexcision
c.Chemotherapy
d.Radiation therapy
e.Immunotherapy

B

Complete surgical excision remains the best hope for cure of early melanoma. A 3.0-cm margin is now the widest recommended, even for deep lesions. Shallower lesions such as this one (less than 0.8 mm thick) may even be excised satisfactorily with a 1.5-cm margin.
Immunotherapy is still investigational and is not used for lesions such as this in which metastases occur very rarely. Radiation therapy is not very successful in the treatment of melanoma. Its main

use is palliation in disease metastatic to bones or the central nervous system. Chemotherapy is not very effective in melanoma, and is used only in widely disseminated cases.

Preventive health care, 2001 update: colorectal cancer screening

MAJOR RECOMMENDATIONS:
Recommendation grade [A, B, C, D, E] and level of evidence [I, II-1, II-2, II-3, III] are indicated after each recommendation. These definitions are repeated following the recommendations. Citations in support of individual recommendations are identified in the guideline text.

Average Risk Individuals

Screening with the Hemoccult test: There is good evidence to include screening with Hemoccult test in the periodic health examination of asymptomatic patients over age 50 with no other risk factors [A,I]. However, there remain concerns about the high rate of false-positive results, feasibility and small clinical benefit of such screening (over 1000 individuals must be screened for 10 years to avert one death from colorectal cancer). For patients being screened with Hemoccult, it is recommended that they avoid red meat, cantaloupe and melons, raw turnips, radishes, broccoli and cauliflower, vitamin C supplements and aspirin and non-steroidal anti-inflammatory drugs for 3 days before fecal samples are collected. However, a recent meta-analysis of 4 randomized controlled trials found no improvement in positivity rates or change in compliance rates with moderate dietary restrictions.

Screening with sigmoidoscopy: There is evidence from case control studies, to recommend that

flexible sigmoidoscopy be included in the periodic health examination of patients over age 50 [B, II-2, III]. There is insufficient evidence to make recommendations about whether only 1 or both of fecal occult blood testing and sigmoidoscopy should be performed [C, I].

Screening with colonoscopy: There is insufficient evidence to include or exclude colonoscopy as an initial screen in the periodic health examination [C, II-3]. Although colonoscopy is the best method for detecting adenomas and carcinomas, it may not be feasible to screen asymptomatic patients because of patient compliance and the expertise and equipment required and the potential costs. On the other hand, if colonoscopy were an effective screening strategy when performed at less frequent intervals, these issues might be of less concern.

Above Average Risk Individuals

Individuals at Risk for Familial Adenomatous Polyposis (FAP): The Task Force recommends genetic testing of individuals at risk for familial adenomatous polyposis if the genetic mutation has been identified in the family and if genetic testing is available [B, II-3]. If the individual carries the mutation, then he or she should be screened with flexible sigmoidoscopy beginning at puberty [B, II-3]. Individuals from families where the gene mutation has been identified but are negative themselves, require screening similar to the average risk population. For at risk individuals where the mutation has not been identified in the family or where genetic testing is not available, screening with annual or biannual flexible sigmoidoscopy should be undertaken beginning at puberty. In all instances, genetic counseling should be performed prior to genetic testing.

Individuals at Risk for Hereditary Non-Polyposis Colon Cancer (HNPCC): Patients in kindreds with the cancer family syndrome (HNPCC) have a high risk of colorectal cancer and a high incidence of right-sided colon cancer. Thus, colonoscopy rather than sigmoidoscopy is recommended for screening such patients. Based on Level III evidence, the Task Force

recommends screening with colonoscopy in individuals from hereditary non-polyposis colon cancer kindreds [B, II-3]. Although higher levels of evidence are usually required to give a B recommendation, the Task Force realizes that it is unlikely that more rigorous studies could be performed in this cohort of patients given the high risk of cancer and relative infrequency of hereditary non-polyposis colon cancer. The ages when screening should begin and the frequency at which colonoscopy should be performed are unclear.

Individuals with a Family History of Polyps or Colon Cancer: Patients who have only one or two first-degree relatives with colorectal cancer should be screened in the same way as average risk individuals. There is insufficient evidence to recommend colonoscopy for individuals who have a family history of colorectal polyps or cancer but do not fit the criteria for hereditary non-polyposis colon cancer [C, III]. While there is evidence that there is an increased prevalence of neoplasms in these individuals, there is insufficient information to recommend more intense screening than that of individuals at average risk. Further delineation of the risk for individuals with multiple affected family members and family members with early age of diagnosis of colorectal cancer is necessary.

Because most screening options are multiphasic, it is preferable that there is adequate infrastructure to support the implementation, assure quality control and the timely follow-up of screened individuals.

Definitions

Recommendation Grade:

Good evidence to support the recommendation that the condition or maneuver be specifically considered in a periodic health examination (PHE).

Fair evidence to support the recommendation that the condition or maneuver be specifically considered in a periodic health examination.

Insufficient evidence regarding inclusion or exclusion of the condition or maneuver in a periodic health examination, but recommendations may be made on other grounds.
Fair evidence to support the recommendation that the condition or maneuver be specifically excluded from a periodic health examination.
Good evidence to support the recommendation that the condition or maneuver be specifically excluded from a periodic health examination.
Quality of evidence was rated according to 5 levels:

I - Evidence from at least 1 properly randomized controlled trial (RCT).

II-1 - Evidence from well-designed controlled trials without randomization.

II-2 - Evidence from well-designed cohort or case-control analytic studies, preferably from more than 1 centre or research group.

II-3 - Evidence from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled experiments could also be included here.

III - Opinions of respected authorities, based on clinical experience, descriptive studies or reports of expert committees.

Hospital Admission Guidelines for Diabetes Mellitus

These guidelines are to be used for determining when a patient requires hospitalization for reasons related to diabetes. Inpatient care may be appropriate in the following situations:

Life-threatening acute metabolic complications of diabetes.

Newly diagnosed diabetes in children and adolescents.

Substantial and chronic poor metabolic control that necessitates close monitoring of the patient to determine the etiology of the control problem, with subsequent modification of therapy.

Severe chronic complications of diabetes that require intensive treatment or other severe conditions unrelated to diabetes that significantly affect its control or are complicated by diabetes.

Uncontrolled or newly discovered insulin-requiring diabetes during pregnancy.

Institution of insulin-pump therapy or other intensive insulin regimens.

Modification of fixed insulin-treatment regimens or sulfonylurea treatment is not, by itself, an indication for hospital admission.

Guidelines for hospital admission are given below. Guidelines are never a substitute for medical judgment, and each patient's total clinical and psychosocial circumstances must be considered in their application. Therefore, there may be situations in which admission is appropriate, although the patient's clinical profile does not comply with these guidelines. For example, inadequate family resources may dictate admission of newly diagnosed type 1 diabetic patients who otherwise do not meet the admission guidelines.

ACUTE METABOLIC COMPLICATIONS OF DIABETES — Admission is appropriate for the following:

Diabetic ketoacidosis
Plasma glucose >250 mg/dl (>13.9 mmol/l) with 1) arterial pH <7.30 and serum bicarbonate level <15 mEq/l and 2) moderate ketonuria and/or ketonemia.

Hyperosmolar hyperosmolar state
Impaired mental status and elevated plasma osmolality in a patient with hyperglycemia. This usually includes severe hyperglycemia (e.g., plasma glucose >600 mg/dl [>33.3 mmol/l]) and elevated serum osmolality (e.g., > 320 mOsm/kg [>320 mmol/kg]).

Hypoglycemia with neuroglycopenia
1) Blood glucose <50 mg/dl (<2.8 mmol/l) and the treatment of hypoglycemia has not resulted in prompt recovery of sensorium; or 2) coma, seizures, or altered behavior (e.g., disorientation, ataxia, unstable motor coordination, dysphasia) due to documented or suspected hypoglycemia; or 3) the hypoglycemia has been treated but a responsible adult cannot be with the patient for the ensuing 12 h; or 4) the hypoglycemia was caused by a sulfonylurea drug.

UNCONTROLLED DIABETES —
Poor metabolic control of established diabetes as defined herein justifies admission if it is necessary to determine the reason for the control problems and to initiate corrective action. For admission under these guidelines, documentation should include at least one of the following:

Hyperglycemia associated with volume depletion.

Persistent refractory hyperglycemia associated with metabolic deterioration.

Recurring fasting hyperglycemia > 300 mg/dl (> 16.7 mmol/l) that is refractory to outpatient

therapy or a glycated hemoglobin level of > 100% above the upper limit of normal.

Recurring episodes of severe hypoglycemia (i.e., < 50 mg/dl [< 2.8 mmol/l]) despite intervention.

Metabolic instability manifested by frequent swings between hypoglycemia (< 50 mg/dl [< 2.8 mmol/l]) and fasting hyperglycemia (> 300 mg/dl [> 16.7 mmol/l]).

Recurring diabetic ketoacidosis without precipitating infection or trauma.

Repeated absence from school or work due to severe psychosocial problems causing poor metabolic control that cannot be managed on an outpatient basis.

ADMISSION FOR COMPLICATIONS OF DIABETES OR FOR OTHER ACUTE MEDICAL CONDITIONS — Chronic cardiovascular, neurological, renal, and other diabetic complications may progress to the stage where hospital admission is appropriate. In these situations, the needs governing admission for the complication per se (e.g., management of end-stage renal disease) are the primary guidelines for determining whether inpatient care is required.

A 27-year-old man with newly diagnosed acute myelogenous leukemia spikes a temperature to 38.7°C (101.7°F) on the sixth day of induction therapy. He feels well and has no physical complaints. His only medicine is intravenous cytosine arabinoside, 140 mg every 12 h. Physical examination is unrevealing. His white blood count is 900/L, of which 10 percent are granulocytes and the rest mostly lymphocytes; platelet count is 24,000/L. Findings on chest x-ray and urinalysis are normal.
After obtaining appropriate cultures, the man's physician should

A observe closely for the development of a clinically evident source of fever
B begin antibiotic therapy with gentamicin and mezlocillin
C begin granulocyte transfusion and antibiotic therapy with gentamicin and mezlocillin
D begin gammaglobulin treatment and antibiotic therapy with gentamicin and mezlocillin
E begin antibiotic therapy with amphotericin, gentamicin, and mezlocillin

The answer is B
If not attacked promptly, infection in neutropenic patients can be quickly fatal. Often, these patients display neither the signs nor the symptoms of infection. Fever should be regarded as an indication of infection, and antibiotic therapy should begin immediately after appropriate cultures are obtained. An effective initial antibiotic regimen would consist of an aminoglycoside antibiotic or third-generation cephalosporin and a semisynthetic antipseudomonal penicillin. Gammaglobulin is of little benefit in the treatment of granulocytopenic cancer patients. Granulocyte transfusions are of no benefit. Amphotericin B is appropriate if granulocytopenia persists and defervescence does not occur after 7 days of antibacterial antibiotics, or sooner, if clinical deterioration is noted.

You are the ICU attending physician taking care of a 40-year-old gay man with AIDS who is intubated with his third bout of pneumocystis pneumonia. His condition is worsening steadily and he has not responded to appropriate antibiotic therapy. The patient's longtime partner, Richard, has a signed durable power of attorney (DPOA) and states that if the patient's condition becomes futile the patient would not want ongoing ventilation. As the ICU attending you decide that ongoing intubation is futile. You consult with Richard and decide to remove the patient from the

ventilator to allow him to die in the morning. The patient's Roman Catholic parents arrive from Kansas and threaten a lawsuit if the ventilator is withdrawn.
There are several key questions which come out of this case:

Who is the legal decision maker here?
What are some of the pertinent social influences in this case?
Who are some other staff members who may be able to help?
How should the physician deal with any prejudices they have in this case?

What is the legal decision making status of a long-term partner?
Richard, the durable power of attorney is the legal decision maker in this case. The document is a legally binding agreement that states Richard is the final arbiter of all medical decisions once the patient becomes incapacitated. This creates a legal foundation for Richard to keep his role as the final medical decision maker in conjunction with the attending physician while allowing room for discussion with the family on this difficult topic.
How should I facilitate communication between family members?
This is an unfortunate situation for everybody involved. The physician can help diffuse this situation by trying to understand the different perspectives that each of the involved individuals brings to the situation. The family arrives to see their dying son and may be confronted with multiple issues for the first time. First they may be finding out that their son is gay, that he has AIDS, and that he is immanently dying all at the same time. Any of these issues may be a shock to the family, so it is important to keep this perspective in mind when making difficult care decisions and to communicate clearly and honestly with them. Communication regarding the patient's care should be consented to by the patient whenever possible.

Alternatively, individuals in the gay communities in metropolitan areas that have been severely affected by AIDS have watched many of their friends die of their disease and are very well educated about end of life issues. It is likely that Richard as your patient's DPOA has spent significant time considering these issues with the patient before becoming the patient's surrogate. His role as the patient's significant other is not legally defined in many areas of the United States at this time. This relationship is often the equivalent of marriage in the gay community and should be respected by the hospital personnel in all points of medical care.

Who are some other staff members who may be able to help?

This is a case where several members may help with the decision. ICU nurses often have experience and perspective in dealing with grieving families of terminally ill patients as do staff social workers or grief counselors. Another invaluable resource in this case is a hospital chaplain or spiritual counselor who may be able to provide spiritual support and guidance to the family. It is important here to find out what resources are available in the hospital for Richard and the patient's family and after discussing the case with them, seek help from these other skilled professionals. If you as a physician have cultivated a relationship with these services it is often appropriate to invite them to a family meeting so that they can help you focus the discussion on the care of the patient, who is always your first priority as a physician.

How should I deal with any prejudices I may have in this case?

Much has been written on the responsibility of the physician in taking care of the patient with AIDS. The AMA position is "A physician may not ethically refuse to treat a patient whose condition is within the physician's realm of competence.... neither those who have the disease or are infected by the virus should be subject to discrimination based on fear or prejudice, least of all from members of the health care community." From this quote it is safe to say that the physician has a fiduciary responsibility toward the care of the HIV infected patient and there is no room within the profession for prejudice for people with AIDS. This stand on prejudice should cover not only gay men with AIDS, but also all other patients that a physician takes care of.

1. Richard
2. Roman cath parents- son gay difficult to accept.

Richard must have been prepared for this event- common in gay community.
3. Nurses/paramedical staff experienced in dealing with gay patients and their significant other.
4. For step3- don't have prejudice against gays etc etc./ if you feel uncomfortable to remove from life-support- your personal views are against it- you can depute other attendings.

Low Back Pain

Work-up

Physical examination.

Standing. Examine for obvious defects. Palpate for tenderness or muscle spasm. Test the mobility of the lumbar spine with flexion, extension, and lateral flexion. Observe the patient's gait and have the patient walk on his toes (foot plantar flexion test S1) and up on his heels (foot dorsiflexion test L5).

With the patient sitting. Sitting straight-leg raising (SLR) test: passive extension of the knee. A positive test is radicular pain at less than 60 degrees. "Crossover" pain with radicular symptoms in the leg not lifted is fairly specific for disk disease.

Reflexes. Patellar reflex tests the L4 root; Achilles tendon reflex tests the S1 root (L5-S1 disk). Babinski sign: if present, indicates disorder above the lumbar region such as cord tumor or CVA.

Sensation. L4: medial border of the feet; L5: triangular area at the base of middle toes on the dorsum of the feet; S1: lateral margin of the feet and distal portion of the calf.

Sensation. Check hip abduction (L5 motor), perianal sensation (S3-5: also controls anal and urethral sphincter tone), hip extension (L5 motor). Saddle anesthesia, decreased anal sphincter tone, and crossover leg pain are signs of a central disk herniation, which is considered a surgical emergency. Must be suspected if there is a history of new bowel or bladder incontinence.

Laboratory and imaging studies.

Lumbar spine films are not necessary in most patients. Plain films should be obtained if symptoms last more than 6 weeks, there is suspicion or history of malignancy, or the patient is using steroids, is over 50 years of age, has a history of trauma, or has neurologic deficits. There is no need to obtain radiographic evaluation for history consistent with muscle strain.
Patients suspected of having infectious or neoplastic causes of low back pain should have an imaging study such as a bone scan, CT, or MRI.
If severe symptoms persist for several weeks despite conservative therapy and disk herniation or another surgically correctable disorder is suspected, then CT or MRI imaging may be useful. Generally, since will not want to intervene surgically unless pain is present for at least 6 weeks, no need for these imaging studies unless there is some indication other than pain (that is, neurologic symptoms such as loss of bowel and bladder function). MRI and CT have replaced myelography except in rare circumstances.
Electromyogram and nerve conduction velocity. Can be used to evaluate suspected nerve root involvement.
Blood tests. Differential CBC with ESR, and biochemical screening (calcium phosphate, alkaline phosphatase) should be performed when a systemic cause for back pain is suspected.
Immunoelectrophoresis of serum and urine samples. Allows diagnosis of most cases of myeloma.

Treatment

Acute back pain (no longer than 6 weeks).

There is no difference in outcome when patients with acute back pain are treated by a family physician, a chiropractor, or an orthopedic surgeon. Therapy by a family physician is the most cost effective.

Regardless of the method of treatment, 40% better within 1 week, 60% to 85% in 3 weeks, and 90% in 2 months. Negative prognostic factors include more than 3 episodes of back pain, gradual onset of symptoms, and prolonged absence from work.

Bed rest. Should be kept to a minimum, and early mobilization encouraged. If symptoms recur or considerable pain develops in relation to a specific activity or level of activity, the patient should temporarily limit activity for several days but should not cease all activity.

Analgesia. NSAIDs most commonly used. Provide pain relief and decrease inflammation. Acetaminophen provides analgesia but has no anti-inflammatory properties. May be used with or instead of NSAIDs. Narcotics should be used for short term only for severe pain. Muscle relaxants such as cyclobenzaprine 10 mg PO TID or QID work mostly by sedating patients and preventing activity. However, they probably have little effect on muscle spasm.

Physical therapy. Although classically several modes have been used to hasten resolution of back pain, most physical therapy modes have no effect when rigorously tested. Traction, local application of heat, cold, and ultrasound, and corsets have been shown to have no effect. Transcutaneous nerve stimulation may provide short-term symptomatic relief but have no proved long-term benefit.

Epidural steroid injections. May speed recovery from radicular pain.

Rehabilitation exercises. Trunk extensors, abdominal muscles, aerobic conditioning. Main benefit is that they promote early mobilization, which is critical in treating acute back pain. The specific exercise doesn't matter as much as the mobilization.

Chronic back pain. Once back pain has been established for more than 1 year, the prognosis is poor. Mild analgesia should be used, avoidance of chronic or repeated reliance on narcotics for pain control is a key management priority. If depression is encountered, it should be treated.

Indications for admission and referral. Cauda equina syndrome (urinary retention, sphincter incontinence, saddle anesthesia), severe neurologic deficits (footdrop, gastrocnemius-soleus or quadriceps weakness), progressive neurologic deficit, or multiple nerve root involvement.

A 67-year-old white male retired factory worker was found to have an abdominal aortic aneurysm on routine physical examination. A vascular surgeon has recommended operative repair. The patient is a former smoker, with a 10-pack-year smoking history. Three years ago, while under the stress of a forced retirement, he had angina which responded well to sublingual nitroglycerin. He has had no angina for 1 year.

Which one of the following conditions would be the most likely cause of perioperative death in this patient?

a.Pulmonary complications
b.Peripheral embolization
c.Operative site infection
d.Myocardial infarction
e.Cerebral infarction

D

Myocardial infarction is the major cause of perioperative death in patients undergoing surgery for abdominal aortic aneurysm. This is especially true of patients with a history of known coronary artery disease or with EKG abnormalities, and it is true even if the coronary artery disease is stable.
Cerebral infarction occurs infrequently, even though cerebral vascular disease is commonly present in this patient group. Operative site infection, peripheral embolization, and pulmonary complications are all significant postoperative complications which may cause death, but they are less frequent causes of death than myocardial infarction.

A patient falls on his outstretched hand and complains of pain in the wrist. There is tenderness to palpation over the anatomic "snuff box," but multiple radiographs of the wrist are negative.

The most appropriate treatment would be to

a.place in a thumb spica cast for 3-4 months
b.place in a short-arm cast for 6-8 weeks
c.place in a long-arm cast for 4-6 weeks
d.immobilize with a plaster cast and obtain additional radiographs in 2 weeks

D

Since scaphoid fractures may not be evident on radiographs for 10 days to 2 weeks, sprains with tenderness over the scaphoid should be immobilized in a splint or cast for 2 weeks and then re-examined by x-ray. If a fracture is demonstrated, a thumb spica cast should be placed on the limb for 2-5 months, depending on which portion of the scaphoid is injured.

The mother of a newborn female who has bilateral cleft lip and palate refuses to nurse her and asks the nurses to feed her in the nursery rather than in her room.

Of the following, the MOST likely explanation for this response is

A. denial that the condition exists
B. fears over the baby's appearance
C. feelings of anger
D. feelings of guilt
E. mourning the loss of a normal child

A or C

A 56-year-old white male has cirrhosis which has progressed as he has ignored your advice to stop drinking. You hospitalize him for treatment of gastrointestinal bleeding. Gastroscopy shows the bleeding to be due to gastritis rather than to an ulcer or varices. His bleeding is stopped, plasma volume is restored with packed red cells, and he does not develop delirium tremens. You administer spironolactone (Aldactone), and over the course of a week in the hospital he loses approximately 10 kg of ascitic fluid.

He is scheduled to be discharged tomorrow morning, but he suddenly develops abdominal pain and a temperature of 38.9° C (102.0° F), and becomes delirious. When you examine him, you find a blood pressure of 90/60 mm Hg, hypoactive bowel sounds, and a diffusely tender abdomen with nonlocalized rebound tenderness. An abdominal tap reveals cloudy ascitic fluid with a large number of polymorphonuclear leukocytes.

The most likely cause of this sudden change in his condition is

a.spontaneous bacterial peritonitis
b.spontaneous pneumoperitoneum
c.a perforated diverticulum
d.a perforated gastric ulcer
e.acute pancreatitis

A

Spontaneous bacterial peritonitis is an increasingly frequent complication of cirrhosis and other conditions which cause ascites. This patient has a classic clinical presentation, with abdominal pain, fever, rebound tenderness, hypoactive bowel sounds, hypotension, and cloudy ascitic fluid. All of these findings are not invariably seen with this condition, however.
Spontaneous bacterial peritonitis occurs in alcoholic cirrhosis, other types of liver disease, occasionally in biliary cirrhosis and cardiac cirrhosis, alcoholic hepatitis, and acute viral hepatitis. It is common in disseminated lupus and can occur in children with nephrotic ascites. Multiple organisms may be involved. The great majority of cases occur in hospitalized patients, and at least 80% of patients have been hospitalized more than a week.
Diverticulitis, appendicitis, and a perforated gastric ulcer are much less likely to produce the generalized abdominal tenderness with rebound seen in peritonitis. Pancreatitis tends to be a presenting complaint rather than a complication developing in a hospitalized patient. Spontaneous pneumoperitoneum is not a frequent complication in patients without extensive diverticulitis.

A 60-year-old white male has had intermittent posterior nuchal headaches for many years. Which one of the following is most likely to help establish a diagnosis?

a.An MRI scan of the head
b.A CT scan of the head
c.An erythrocyte sedimentation rate
d.A neurologic examination
e.A thorough history

E

The best information for making the diagnosis in the patient presented is most likely to come from a thorough history focusing on provocation, quality, region, strength, and timing of the headaches, as well as associated symptoms, a medication history, and screening for depression. CT and MRI scans have not been proven helpful if focal clues are not found. Laboratory tests are not generally helpful when used randomly. While a complete neurologic examination should be done, the results are usually normal in patients with chronic headaches

A 25-year-old white male complains of the recent onset of rapidly progressing periodontitis. As part of your evaluation, which one of the following tests would be most advisable?

a. Serum lead
b. Serum ferritin
c. Serum B12
d. HIV titer

D

Rapidly progressive periodontitis appears to be an early sign of immunocompromise in patients with HIV infection. HIV antibody titers and T4:T8 lymphocyte ratios are indicated, especially if the patient's dental hygiene appears adequate. Dental referral is also indicated. None of the other tests mentioned is associated with periodontitis.

A 29-year-old white female is hospitalized following a right middle cerebral artery stroke confirmed on an MRI scan. Her past medical history is remarkable only for a history of an uncomplicated tonsillectomy during childhood, and a second-trimester miscarriage 3 years ago. The only remarkable finding on physical examination is left hemiplegia.

The initial laboratory workup reveals normal hematocrit and hemoglobin levels, a normal prothrombin time, and a platelet count of 200,000/mm3 (N 140,000-440,000). The active partial thromboplastin time is 95 sec (N 23.6-34.6), and it does not normalize when the patient's serum is mixed with normal plasma. A serum VDRL is positive, and a serum FTA-ABS is nonreactive.

Which one of the following is the most likely diagnosis?

a. Protein C deficiency

b. Thrombotic thrombocytopenic purpura

c. Antiphospholipid syndrome

d. Neurosyphilis

e. Hemophilia

C

The antiphospholipid syndrome occurs because of the appearance of a heterogeneous group of circulating antibodies to negatively charged phospholipids, including most commonly a lupus anticoagulant and anticardiolipin antibodies. The antibodies are usually detected by a false-positive serologic test for syphilis. Clinical features include venous and arterial thrombosis, fetal wastage, thrombocytopenia, and the presence of an activated partial thromboplastin time inhibitor. It is an important diagnostic consideration in all patients with unexplained thrombosis or cerebral infarction, particularly in young patients.

Although hemophilia would also be associated with a prolonged activated partial thromboplastin time (aPTT), the PTT would normalize when the patient's serum was mixed with normal plasma. Neurosyphilis is excluded by the negative serum FTA-ABS result. Thrombotic thrombocytopenic purpura is not associated with prolongation of the aPTT and is associated with a hemolytic anemia. Although protein C deficiency is a hypercoagulable state that can lead to stroke, none of the laboratory abnormalities suggests this diagnosis.

Sleep apnea..

Obstructive sleep apnea (OSA) is characterized by recurrent episodes of upper airway collapse and obstruction during sleep. These episodes of obstruction are associated with recurrent oxyhemoglobin desaturations and arousals from sleep. When associated with excessive daytime sleepiness, the term obstructive sleep apnea syndrome (OSAS) is frequently used. Despite being a common disease, OSA is underrecognized by most primary care physicians in the U.S. (it is estimated that 80% of Americans with OSA are not diagnosed).

Medical Care: The treatment of OSA in part depends upon the severity of the sleep-disordered breathing. Mild apneics have a wider variety of options, while moderate to severe apneics should be treated with nasal CPAP.

Conservative measures include weight loss, avoidance of alcohol for 4-6 hours prior to bedtime, and sleeping on the side. These measures should be included in the treatment of all patients with OSA but should be used exclusively only in patients with very mild apnea whose main complaint is snoring.

Nasal Continuous Positive Airway Pressure (CPAP): CPAP is the most effective treatment for OSA and has become the standard of care for OSA. CPAP works by splinting the upper airway, preventing the soft tissues from collapsing. By this mechanism it effectively eliminates the apneas/hypopneas, decreases the arousals and normalizes the oxygen saturation (Figure 6). Most sleep centers still titrate the CPAP level during a sleep study. This can be done as a second night of study or during the second half of the diagnostic study (this type of study is called split-night polysomnography). There are now CPAP devices that automatically change pressures based

upon the presence/absence of OSA. The exact indications for these devices are still being determined.

CPAP has been shown to improve daytime sleepiness, mood and cognitive function in both mild and moderate apneics. Has also been shown to increase quality of life and decrease health care costs.
The most common side effects of CPAP are dry mouth, rhinitis and sinus congestion. These can be effectively treated with humidification and antihistamines and/or nasal steroids.
Unfortunately, compliance is a major problem, with only about 50% of patients using their CPAP on a regular basis, in short term studies. Predictors of compliance include severe daytime sleepiness, baseline AHI and a higher degree of education.
In a study of long-term compliance, 68% of patients were using their CPAP machine at 5 years. Predictors of long-term compliance were baseline AHI and degree of sleepiness. the best predictor, However, was regular use at 3 months of therapy, indicating that physicians must work to increase patient compliance early in the treatment period.

Recent studies indicate that heated humidification, increased patient education and weekly phone calls early in the treatment period can increase compliance.

Some patients require the use of bilevel positive airway pressure (BPAP). In BPAP, there is a higher inspiratory pressure (IPAP) and a lower expiratory pressure (EPAP). In patients with sleep apnea, the levels are set such that the EPAP eliminates apneas and the IPAP eliminates hypopneas. BPAP is generally used in patients who cannot tolerate high CPAP pressures (find it difficult to exhale) or have barotrauma complications (ear infections, bloating). Many laboratories will automatically place a patient on BPAP if the CPAP level needs to be increased above 15 cmH2O. Compliance on BPAP has not been shown to be better than on CPAP.
Dental devices act by moving the tongue or mandible forward. They can be effective for patients with an AHI less than 40/hr. Early evidence suggests there is a patient preference to these devices compared to CPAP. Evidence now suggests appropriate first-line therapy in mild apneics; use as an alternative if patient fails CPAP. Needs more definitive studies of efficacy before can be

routinely recommended.
Surgical Care: Surgical correction of the upper airway is no longer considered primary therapy. It is generally recommended only for patients who have failed CPAP or refuse to consider it, or have very mild (AHI less than 10) OSA. Surgeries include:

Uvulopalatopharyngoplasty (UPPP): Resection of the uvula and soft palate. Effective in about 40% of patients, but it is impossible to predict which patients will benefit from the procedure
The new laser-assisted approach should only be used for patients with simple snoring.
Craniofacial Reconstruction: Involves advancement of tongue or maxillomandibular bones. Should be performed only at centers with expertise. Moderate success rates.
Tracheostomy: Provides definitive correction as it bypasses the obstruction. Recommended in very severe OSA, especially if the patient does not tolerate CPAP or has cor pulmonale.
Consultations: All patients with signs and/or symptoms of OSA should be referred to a sleep disorders center for an evaluation by a sleep physician and polysomnography. A comprehensive sleep evaluation is recommended because up to 25% of sleep patients have more than one sleep disorder, many of which are only identified because of the sleep consultation.

Any patient with loud habitual snoring and any other feature of OSA being considered for surgery should be referred for a sleep study prior to surgery. This is important to rule out OSA, as the surgery will likely correct the snoring but may not correct the apnea/hypopneas, which are associated with other morbidities.
Diet: All obese patients should be counseled about the importance of diet and exercise and be referred to a dietitian and/or weight loss program.

ccs...asthmatic child coming to er

Asthmatic child coming to the ER:

O2 mask
iv line
Labs:
CBC
ABG's
pulseoxymetry
CHEM 7
CXR
Spirometry
Albuterol inhaled 2puffs
Beclomethasone inhaled 2 puffs 5 minutes after albuterol

If the patient status improve->move to ward room and keep him there for 3 days.Consider chronic maintanance therapy with
Cromolyn Na 2puffs qid
and Albuterol inhaled.RAST test before discharge.Recomand removal of allergens.

If the patient status is worsening intubate+mechanical ventilation
epinephrine s.c.
methilprednisolone i.v.
Albuterol inhaled
move to ICU
vitals monitoring
ECG monitoring

keep in ICU until improvement+1day
weaning before move

take off iv medication
replace with inhaled medication
keep in ward room for other 3 days.
RAST test
Tx at discharge:Cromolyn Na
Albuterol inh.

Lab Studies:

Obtain a CBC and differential to evaluate infectious causes (eg, pneumonia, viral infections such as croup), allergic bronchopulmonary aspergillosis and Chrug-Strauss vasculitis.
Obtain arterial blood gases (ABGs) to assess the severity of the asthma attack and to substantiate the need for more intensive care. ABGs are indicated when the peak expiratory flow rate or FEV1 are less than or equal to 30% of predicted, or the patient shows evidence of fatigue or progressive airways obstruction despite treatment. ABGs are important to identify the severity of the asthma attack. The 4 stages of blood gas progression in status asthmaticus are as follows:
The first stage is characterized by hyperventilation with a normal partial pressure of oxygen (PO2).
The second stage is characterized by hyperventilation accompanied by hypoxemia.
Stage 3 is characterized by the presence of a false normal partial pressure of carbon dioxide (PCO2), which is a very serious sign of fatigue that signals that the patient needs expanded care, such as admission to the intensive care unit, and, probably, intubation with mechanical ventilation.
The last stage is characterized by a low PO2 and a high PCO2, which is an even more dangerous sign that mandates intubation and ventilatory support.
Imaging Studies:

Obtain a chest radiograph looking for pneumonia, pneumothorax, congestive heart failure, and signs of chronic obstructive pulmonary disease (COPD) that would complicate the patient's response to treatment or reduce the patient’s baselinespirometry values.
Other Tests:

The most important and readily available test to evaluate the severity of an asthma flare is the measurement of peak flow. In most patients with asthma, the decrease in peak flow in terms of percent of predicted corrrelates with changes in spirometry.
NHLBI/NAEPP guidelines:
Severe asthma exacerbation usually associated with peak expiratory flow (PEF) or FEV1 <50% of predicted. Hospitalization is generally indicated when PEF or FEV1 after treatment is > 50% but <70% of predicted. Hospitalization in the intensive care unit is indicated when PEF or FEV1 is < 50% of predicted
Use pulse oximetry and spirometry to follow the progression of asthma. As the results improve, treatment may be adjusted accordingly.
A drop in the forced expiratory volume in the first second (FEV1) below 25% of the predicted value indicates a severe airway obstruction.
If a portable spirometry unit is not available, a peak expiratory flow rate of 20% or less of the predicted value (ie, usually <100 L/min) suggests severe airflow obstruction and impending respiratory failure.
An FEV1 of greater than 60% of the predicted value may be managed on an outpatient basis, depending on the clinical situation. However, if patient's FEV1 or PEF drops to less than 50% of predicted, admission to the hospital is recommended.

Medical Care: After confirming the diagnosis and assessing the severity of the asthma flare, direct treatment towards controlling bronchoconstriction and inflammation.

Bronchodilator treatment with beta-2 agonists

The first line of therapy is bronchodilator treatment with a beta-2 agonist, typically albuterol.

Handheld nebulizer treatments may be given, either continuously (10-15 mg/hour)or by frequent timing (eg, q5-20 min), depending on the severity of the bronchospasm.

The dose of albuterol for intermittent dosing is 0.3-0.5 cc of a 0.5%-formulation mixed with 2.5 cc of normal saline. Many of these preparations are available in a premixed form with a concentration of 0.083%.

Studies have also shown an excellent response to well-supervised use of albuteral via metered-dose inhaler with a chamber. The dose is 4 puffs, repeated at 15-30 minute intervals as needed.

Most patients respond within 1 hour of treatment.

Recently, the US Food and Drug Administration (FDA) approved the use of the R isomer of albuterol known as levalbuterol for treating patients with acute asthma. This isomer has fewer effects on the heart rhythm (ie, tachyarrhythmia) and is associated with fewer incidences of tremors, while having the same or greater clinical bronchodilator effects as racemic albuterol.

The decreased incidence of adverse effects with this new medication may allow physicians to use nebulizer therapy in patients with acute asthma more frequently with less concern over the adverse effects of other bronchodilators (eg, albuterol, metaproterenol).

The dose of levalbuterol is either 0.63-mg vials for children or 1.26-mg vials for adults. These drugs, especially albuterol, are safe to use during pregnancy.
Nonselective beta-2 agonists

Patients whose bronchoconstriction is resistant to continuous handheld nebulizer treatments with traditional beta-2 agonists may be candidates for nonselective beta-2 agonists, such as epinephrine (0.3-0.5 mg) or terbutaline (0.25 mg)given subcutaneously. However, there is no proven advantage of systemic therapy over aerosol therapy with selective beta-2 agents.

Exercise caution in patients with other complicating factors such as congestive heart failure or a history of cardiac arrhythmia.

Intravenous isoproterenol is not recommended in the treatment of asthma because of the risk of myocardial toxicity.

Ipratropium treatment

Ipratropium, which comes in premixed vials at 0.2%, can be synergistic with albuterol or other beta-2 agonists.

Use ipratropium every 4-6 hours.

Adults may be less responsive to parasympathetic stimulation than children, because children appear to have more cholinergic receptors.

Oxygen monitoring

Monitoring the patient's oxygen saturation is, of course, essential during the initial treatment.

ABGs usually are used to assess hypercapnia during the patient’s initial assessment.

Oxygen saturation is then monitored via pulse oximetry throughout the treatment protocol.

Oxygen therapy

Oxygen therapy is essential. It can be given via a nasal canula or mask, although patients with dyspnea often do not like masks.

With the advent of pulse oximetry, oxygen therapy can be easily titrated to maintain the patients's oxygen saturation above 92%, or above 95% in pregnant patients or those with cardiac disease.

Glucocorticosteroids

Steroids are the most important treatment of status asthmaticus.

The usual dose is daily oral prednisone at 1-2 mg/kg/d.

In the author's experience, methylprednisolone provides excellent efficacy when given intravenously at 1 mg/kg per dose every 6 hours.

Some authorities report that pulse therapy with steroids at a high dose (eg, 10-30 mg/kg/d as a single dose) is associated with a more rapid response and less hospitalization time, with similar adverse effects. This, however, is not standard therapy. The adverse effects of pulse therapy, in the author's experience, are very minimal and comparable to the traditional doses of intravenous steroids. Adverse effects may include hyperglycemia, which usually is reversible once steroid therapy is stopped; increased blood pressure; weight gain; increased striae formation; and hypokalemia. Long-term adverse effects depend on the duration of steroid therapy after the patient leaves the hospital.

Steroid treatment for acute asthma is necessary but has potential adverse effects. Serum glucose needs to be monitored and insulin can be given on a sliding scale if needed. Monitoring of the patient's electrolytes, especially potassium, is essential. Hypokalemia can cause muscle weakness, which may worsen respiratory distress and cause cardiac arrhythmias.

Nebulized steroids

The use of nebulized steroids for treating status asthmaticus is controversial. Recent data in children comparing nebulized budesonide with prednisone suggests that the latter therapy is more

effective for treating status asthmaticus.

No good scientific evidence exists to support using nebulized dexamethasone or triamcinolone via a handheld nebulizer.

To the contrary, in the author's experience, more adverse effects, with a cushingoid appearance and irritative bronchospasm, have occurred with these nebulizers.

Intravenous fluids should be given to restore euvolemia.

Discourage routine antibiotic use. Patients should only use antibiotics when they show evidence of infection, such as pneumonia or sinusitis.

Aminophylline

Conflicting reports on its efficacy have made aminophylline therapy controversial.

Starting intravenous aminophylline may be reasonable in patients who do not respond to medical treatment with bronchodilators, oxygen, corticosteroids, and IV fluids within 24 hours.

Recent data suggests that aminophylline may have an anti-inflammatory effect in addition to its bronchodilator properties.

The loading dose usually is 5-6 mg/kg, followed by continuous infusion of 0.5-0.9 mg/kg/h.

Physicians must monitor the patient’s theophylline level. Traditionally, the level was targeted to the higher end of the local therapeutic range; however, many authorities suggest that the lower portion of the range (ie, >5 but <10) may be preferable if the patient can obtain the benefits of the drug in the lower range.

Adverse effects can include tachyarrhythmia, nausea, seizures, and anxiety.

A 33-year-old woman comes to the local health clinic because for the last 6 months she has had recurrent urticarial lesions, which occasionally leave a residual discoloration. She also has had arthralgias. Sedimentation rate obtained now is 85 mm/h. The procedure most likely to yield the correct diagnosis in the case would be

A: a battery of wheal-and-flare allergy skin tests

B: measurement of total serum immunoglobulin E (IgE) concentration

C: measurement of C1 esterase inhibitor activity

D: skin biopsy

E: patch testing

The answer is D

Urticaria and angioedema are common disorders, affecting approximately 20 percent of the population. In acute urticarial angioedema, attacks of swelling are of less than 6 weeks' duration; chronic urticarial angioedema is by definition more long-standing. Urticaria usually is pruritic and affects the trunk and proximal extremities. Angioedema is generally less pruritic and affects the hands, feet, genitalia, and face. The woman described in the question has chronic urticaria,

which probably is due to a cutaneous necrotizing vasculitis. The clues to the diagnosis are the arthralgias, presence of residual skin discoloration, and elevated sedimentation rate-these would be uncharacteristic of other urticarial diseases. Diagnosis can be confirmed by skin biopsy. Chronic urticaria is rarely of allergic cause; hence, allergy skin tests and measurement of total immunoglobulin E levels are not helpful. Measurement of C1 esterase inhibitor activity is useful in diagnosing hereditary angioedema, a disease not associated with urticaria. Patch tests are used to diagnose contact dermatitis.

What's the effect of oral OCP [combo pills] on LDL/HDL/TG/Total chl/glucose

What's the effect of ocp patch [skin patch] on LDL/HDL/TG/Total chl/glucose

Is there any difference guys ?

According to MKSAp: ACp recommendation.....you can give metronidazole in 1st Trimester also. ....Infact there is a quetion in MKSAp and they advice giving metronidazole

metro is used for treatment of symptomatic bacterial vaginosis because of the strong association with PID as well as with adverse pregnancy outcomes such as preterm delivery. In randomized trials treatment of bacterial vaginosis in pregnancy has shown to reduce the rate of preterm delivery.

prognosis of Breast cancer/Prostrate cancer/ Tamoxifen and prognosis in breast

breast cancer..prognosis

Prognosis is frequently defined in terms of 5-year survival—the percentage of people alive 5 years after diagnosis. Although several factors affect prognosis, the stage of the disease is most important. People with disease confined to the breast have a 97% 5-year survival rate. Those with involvement of regional lymph nodes have a 75%-85% 5-year survival, and those with stage III disease with more extensive local or lymph disease have approximately a 50% 5-year survival. When the disease has already spread from the immediate area or metastasized, the 5-year survival rate is 20%. Older people with breast cancer, those over 65, have a better prognosis than younger ones.

It is helpful to remember that survival rates are calculated for groups of people with the same disease. Within the group, variation exists in the individual survival rates. Even with disease that has metastasized, breast cancer is a highly treatable disease.

prostate cancer..prognosis

The prognosis depends on the stage of the cancer as well as the degree of differentiation.

Differentiation refers to how closely the cancer resembles normal tissue. The less differentiated the cancer, the poorer the prognosis.
The stage refers to the extent of the cancer—whether it is localized or has spread beyond the prostate. The greater the degree the cancer has spread, the poorer the outlook.
Five-year survival rates are very good for men with prostate cancer: 92% of men diagnosed with cancer survive at least 5 years, according to the American Cancer Society. Most prostate cancers are slow growing as evidenced by the fact that 67% of men diagnosed survive at least 10 years. However, it is possible that a prostate cancer may grow and spread rapidly. Therefore early diagnosis is essential for a cure.
For elderly men: For men who are at an advanced age and have other medical conditions, it may be more prudent to observe the person and follow the PSA levels. Therapy may be more harmful. This is especially the case if the man is elderly and not expected to live more than 10 years. Many times, the man will die as a result of something else, such as heart disease, not the slow-growing prostate cancer. It is advisable for the physician to discuss this issue with the man and his family.

Tamoxifen (national cancer institute) date reviewed: 03/05/2001

What is tamoxifen?
Tamoxifen (Nolvadex®) is a medication in pill form that interferes with the activity of estrogen (a hormone). Tamoxifen has been used for more than 20 years to treat patients with advanced breast cancer. It is used as adjuvant, or additional, therapy following primary treatment for early stage breast cancer. In women at high risk of developing breast cancer, tamoxifen reduces the chance of developing the disease. Tamoxifen continues to be studied for the prevention of breast cancer. It is also being studied in the treatment of several other types of cancer. It is important to note that tamoxifen is also used to treat men with breast cancer.

How does tamoxifen work on breast cancer?
Estrogen promotes the growth of breast cancer cells. Tamoxifen works against the effects of

estrogen on these cells. It is often called an "anti-estrogen." As a treatment for breast cancer, the drug slows or stops the growth of cancer cells that are present in the body. As adjuvant therapy, tamoxifen helps prevent the original breast cancer from returning and also helps prevent the development of new cancers in the other breast.

Are there other beneficial effects of tamoxifen?

While tamoxifen acts against the effects of estrogen in breast tissue, it acts like estrogen in other tissue. This means that women who take tamoxifen may derive many of the beneficial effects of menopausal estrogen replacement therapy, such as lower blood cholesterol and slower bone loss (osteoporosis).

Can tamoxifen prevent breast cancer?

Research has shown that when tamoxifen is used as adjuvant therapy for early stage breast cancer, it reduces the risk of recurrence of the original cancer and also reduces the risk of developing new cancers in the other breast. Based on these findings, the National Cancer Institute (NCI) funded a large research study to determine the usefulness of tamoxifen in preventing breast cancer in women who have an increased risk of developing the disease. This study, known as the Breast Cancer Prevention Trial (BCPT), was conducted by the National Surgical Adjuvant Breast and Bowel Project (NSABP), a component of the NCI's Clinical Trials Cooperative Group Program. This study found a 49 percent reduction in diagnoses of invasive breast cancer among women who took tamoxifen. Women who took tamoxifen also had 50 percent fewer diagnoses of noninvasive breast tumors, such as ductal or lobular carcinoma in situ. However, there are risks associated with tamoxifen. Some are even life threatening. The decision to take tamoxifen is an individual one: The woman and her doctor must carefully consider the benefits and risks of therapy.

Women with an increased risk of developing breast cancer have the option to consider taking tamoxifen to reduce their chance of developing this disease. They may also consider participating

in the Study of Tamoxifen and Raloxifene (see question 5).

At this time, there is no evidence that tamoxifen is beneficial for women who do not have an increased risk of developing breast cancer.

What is the Study of Tamoxifen and Raloxifene (STAR), and how can a woman learn more about it?

The Study of Tamoxifen and Raloxifene (STAR) is a clinical trial (a research study conducted with people) designed to see whether the osteoporosis drug raloxifene (Evista®) is more or less effective than tamoxifen in reducing the chance of developing breast cancer in women who are at an increased risk of developing the disease. Raloxifene may have breast cancer risk reduction properties similar to those found in tamoxifen. This study will also examine whether raloxifene has benefits over tamoxifen, such as fewer side effects.

The STAR trial, which began in June 1999, is being conducted by the NSABP. It will involve about 22,000 postmenopausal women who are at least 35 years old and are at increased risk for developing breast cancer.

Women can learn more about the STAR trial in several ways. They can call NCI's Cancer Information Service at 1–800–4–CANCER (1–800–422–6237). The number for deaf and hard of hearing callers with TTY equipment is 1–800–332–8615. Information is also available on NSABP's Web site at http://www.nsabp.pitt.edu or NCI's cancerTrials™ Web site at http://cancertrials.nci.nih.gov on the Internet.

What are some of the more common side effects of taking tamoxifen?

In general, the side effects of tamoxifen are similar to some of the symptoms of menopause. The most common side effects are hot flashes and vaginal discharge. Some women experience irregular menstrual periods, headaches, fatigue, nausea and/or vomiting, vaginal dryness or

itching, irritation of the skin around the vagina, and skin rash. As is the case with menopause, not all women who take tamoxifen have these symptoms. Men who take tamoxifen may experience headaches, nausea and/or vomiting, skin rash, impotence, or a decrease in sexual interest.

Does tamoxifen cause uterine cancer?

The BCPT found that women taking tamoxifen had more than twice the chance of developing uterine cancer compared with women who took a placebo (an inactive substance that looks the same as, and is administered in the same way as, tamoxifen). The risk of uterine cancer in women taking tamoxifen was in the same range as (or less than) the risk in postmenopausal women taking single-agent estrogen replacement therapy. Additional studies are under way to define more clearly the role of other risk factors for uterine cancer, such as prior hormone use, in women receiving tamoxifen.

Most of the uterine cancers that have occurred during studies of women taking tamoxifen have been found in the early stages, and treatment was usually effective. However, tamoxifen was life threatening for some breast cancer patients who developed uterine cancer while taking tamoxifen.

Abnormal vaginal bleeding and lower abdominal (pelvic) pain are two symptoms of uterine cancer. Women who are taking tamoxifen should talk with their doctor about having regular pelvic examinations, and should also be checked promptly if they have any abnormal vaginal bleeding between scheduled exams.

Does tamoxifen cause blood clots or stroke?

Data from large treatment studies suggest that there is a small increase in the number of blood clots in women taking tamoxifen, particularly in women who are receiving anticancer drugs (chemotherapy) along with tamoxifen. The total number of women who have experienced this side effect is small. The risk of having a blood clot due to tamoxifen is similar to the risk of a blood clot when taking estrogen replacement therapy.

Women in the BCPT who took tamoxifen also had an increased chance of developing blood clots and an increased chance of stroke.

Does tamoxifen cause eye problems?
As women age, they are more likely to develop cataracts (a clouding of the lens inside the eye). Women taking tamoxifen appear to be at increased risk for developing cataracts. Other eye problems, such as corneal scarring or retinal changes, have been reported in a few patients.

Does tamoxifen cause other types of cancer?
Although tamoxifen can cause liver cancer in particular strains of rats, it is not known to cause liver cancer in humans. It is clear, however, that tamoxifen can sometimes cause other liver toxicities in patients, which can be severe or life threatening. Doctors may order blood tests from time to time to check liver function.

One study suggested a possible increase in cancers of the digestive tract among women receiving tamoxifen for breast cancer. Other trials, including the BCPT, have not shown an association between tamoxifen and these cancers.

Studies such as the BCPT show no increase in cancers other than uterine cancer. This potential risk is being evaluated.

Should women taking tamoxifen avoid pregnancy?
Yes. Tamoxifen may make premenopausal women more fertile, but doctors advise women on tamoxifen to avoid pregnancy because animal studies have suggested that the use of tamoxifen in pregnancy can cause fetal harm. Women who have questions about fertility, birth control, or pregnancy should discuss their concerns with their doctor.

Does tamoxifen cause a woman to begin menopause?

Tamoxifen does not cause a woman to begin menopause, although it can cause some symptoms that are similar to those that may occur during menopause. In most premenopausal women taking tamoxifen, the ovaries continue to act normally and produce estrogen in the same or slightly increased amounts.

Do the benefits of tamoxifen in treating breast cancer outweigh its risks?

The benefits of tamoxifen as a treatment for breast cancer are firmly established and far outweigh the potential risks. Patients who are concerned about the risks and benefits of tamoxifen or any other medications are encouraged to discuss these concerns with their doctor.

How long should a patient take tamoxifen for the treatment of breast cancer?

Patients with advanced breast cancer may take tamoxifen for varying lengths of time, depending on their response to this treatment and other factors. When used as adjuvant therapy for early stage breast cancer, tamoxifen is generally prescribed for 5 years. However, the ideal length of treatment with tamoxifen is not known.

Two studies have confirmed the benefit of taking adjuvant tamoxifen daily for 5 years. These studies compared 5 years of treatment with tamoxifen with 10 years of treatment. When taken for 5 years, the drug reduces the risk of recurrence of the original breast cancer and also reduces the risk of developing a second primary cancer in the other breast. Taking tamoxifen for longer than 5 years is not more effective than 5 years of therapy.

Sources of National Cancer Institute Information

A 56-year-old chronic alcoholic and heavy smoker presents with a 3-cm, firm, right midcervical neck mass. An excisional biopsy reveals squamous cell carcinoma. Which of the following is the most appropriate approach at this time?

A: Bronchoscopy, esophagoscopy, and laryngoscopy

B: CT of the neck

C: CT of the brain

D: Neck dissection

E: Radiation therapy

The answer is A

Patients who are heavy smokers and drinkers are at increased risk to develop squamous cell carcinoma of the head and neck. In fact, the risk for those who both smoke and drink is multiplicatively increased compared with those who abuse just one of these substances. A firm neck mass in a patient with these habits should prompt an aggressive search for a primary lesion in the head and neck region and would include panendoscopy (laryngoscopy, esophagoscopy, and bronchoscopy) with biopsy of all suspicious areas.

Electrical Injuries

Electrical injuries are infrequent but eventually are encountered by most practitioners of emergency medicine. These injuries encompass various diagnostic and treatment modalities. Generally, they may be classified as lightning, low voltage, and high voltage.

Lightning: Overall, the survival from lightning strike is greater than 50%. If cardiac and/or respiratory arrest has occurred, prolonged cardiopulmonary resuscitation (CPR) may cause recovery. Unfortunately, prolonged arrest comes with an increasing probability of permanent brain injury, persistent vegetative states, and brain death.

Low-voltage electrical injury without cardiac and/or respiratory arrest: This situation is encountered frequently in children who bite extension cords. The burns of the mouth are often severe and require extensive plastic revision. However, systemic problems are infrequent. Low-voltage electrical injury with cardiac and/or respiratory arrest: These patients often are not transported to the ED, since they are pronounced dead at the scene. If they are transported and if CPR has been prompt and effective, complete and total recovery, usually with no apparent injury, may occur. Unfortunately, as with lightning, protracted periods without brain perfusion result in permanent brain damage.

High-voltage injury: Generally, patients who have been in high-voltage circuits do not arrest but have extensive injuries from burns and are at risk of acute and chronic problems from myoglobinuria. Electrical burns from high-voltage circuits generally are much worse than they appear in the ED.

Lab Studies:

In all patients in whom history or physical examination indicates more than a trivial electrical injury and/or exposure, obtain the following tests, which provide important baseline values for future treatment:

CBC (hemoglobin, hematocrit, white count, red cell indices)

Electrolytes (sodium, potassium, chloride, carbon dioxide, urea, glucose)

Creatinine

Urinalysis (specific gravity, pH, color, tests for glucose and hemoglobin)

In addition to the more common tests, an assessment of muscle damage should be performed by ordering the following:

Creatine phosphokinase (CPK), total and fractionated, if elevated

Urine myoglobin, if urine gives positive hemoglobin test

Serum myoglobin if the urine is positive for myoglobin

The above tests effectively measure the extent of muscle damage. High levels of CPK, identified as muscle with often some elevation in the myocardial component, are observed in significant exposures to low-voltage and high-voltage circuits. Lightning rarely causes an elevation.

Extensive muscle damage leads to myoglobinemia and myoglobinuria.

In patients with arrest or loss of consciousness, strongly consider arterial blood gas analysis and a complete drug screen test.

Imaging Studies:

If clinically indicated because of chest trauma, shortness of breath, or history of CPR at the scene, obtain a chest x-ray.

Blunt trauma directly from involuntary contraction of muscles or indirectly from falling secondary to involuntary contraction of muscles requires imaging studies directed toward discovering possible fractures or even internal injuries.

Approach these in the same fashion as blunt trauma by other causes and order appropriate testing as indicated.

Other Tests:

Electrocardiogram

An ECG is indicated in any person in whom electrical injury is suspected. If arrhythmias are

encountered or if the patient experienced a high-voltage injury, monitoring is indicated.
If no arrhythmias are encountered, further ECG studies are not necessary.
Electroencephalogram
An EEG may be indicated in a person who is unconscious or in arrest.
The necessity of performing an EEG in the ED depends on a number of institutional factors. It is not critical to early care decision making.

Procedures:
Obtain intravenous access in all persons who have electrical injury. Consider a central line in those with more than trivial burns and in those who were unconscious or arrested in order to monitor fluid status.
Fasciotomies of burned extremities may be required in high-voltage injuries. Obtain consultation with surgeons with experience in electrical burn injury early in the treatment of a patient with a high-voltage burn, since appropriate early fasciotomy may save a limb.
Prehospital Care:
First, remove the patient from the circuit.
Patients who are in arrest then require basic and advanced cardiac life support regimens. In electrically induced arrest, no underlying disease causes the arrest. Therefore, protracted efforts of resuscitation are met with success more often than usual.
Patients who are unconscious but not in arrest require careful ventilatory observation and assistance, if indicated.
Patients with burns above the neck require supplemental oxygen because of the high probability of airway and lung damage.
Secondary blunt trauma often is encountered due to falls caused by involuntary muscular contraction. It is dealt with identically to any other blunt trauma.

Emergency Department Care:
Stabilize patients with electrical burns and consider immediate transfer to the nearest burn center. If such facilities are not available, physicians with experience in burns, preferably in electrical burns, should assume care of the patient.

Hydrate all patients with burns and no apparent CNS abnormality. Using the ordinary rule of thumb for treating the typical burn patient may result in significant dehydration. In patients without CNS abnormalities, administration of physiologic fluids such as Ringer lactate at a rate of 10 mL/kg/h is reasonable during the initial resuscitation.

In patients with CNS abnormality, temper hydration with the possibility of worsening cerebral edema. No easy way of titrating this clinically difficult area is available.

Add mannitol or furosemide to the regimen of patients with elevated CPKs and/or myoglobinemia. These drugs provide diuresis for the toxic myoglobin, which can help to prevent acute tubular necrosis and renal failure secondary to myoglobinuria.

Treat a patient who has been struck by lighting based on CNS symptoms. If consciousness is present on admission or returns in the ED, inpatient therapy may not be required. If CNS abnormalities persist, hospitalization is indicated.

The successfully resuscitated patient exposed to low voltage without significant burns also may be treated primarily on the basis of CNS symptoms and CPK results. If consciousness returns, the CPK is no more than 2 times normal with negative hemoglobin in the urine, and the pulse is regular, hospitalization may be brief.

Irregularities of pulse, ECG changes, myoglobinuria, or CNS abnormalities require hospitalization.

Consultations: Patients with electrical burns require treatment by burn specialists. Prompt transfer to the care of such an individual is indicated. In high-voltage electrical burns, early fasciotomy may be indicated to improve circulation. Thus, seek guidance as rapidly as possible concerning when to initiate this procedure in the ED. Consultations include the following:

Trauma and/or critical care

General surgery

Plastic and/or burn surgery

Hyperbaric Oxygen Therapy

What is Hyperbaric Oxygen Therapy?

Hyperbaric oxygen is a mode of therapy in which the patient breathes 100% oxygen at pressures greater than normal atmospheric (sea level) pressure. In contrast with attempts to force oxygen into tissues by topical applications at levels only slightly higher than atmospheric pressure, hyperbaric oxygen therapy involves the systemic delivery of oxygen at levels 2-3 times greater than atmospheric pressure.

What are the Beneficial Mechanisms?

Several beneficial mechanisms are associated with intermittent exposure to hyperbaric doses of oxygen. Either alone, or more commonly in combination with other medical and surgical procedures, these mechanisms serve to enhance the healing process of treatable conditions.

HYPEROXYGENATION provides immediate support to poorly perfused tissue in areas of compromised blood flow. The elevated pressure within the hyperbaric chamber results in a 10-15 fold increase in plasma oxygen concentration. This translates to arterial oxygen values of between 1,500 and 2000 mmHg, thereby producing a four-fold increase in the diffusing distance of oxygen from functioning capillaries. While this form of hyperoxygenation is only a temporary measure, it will often serve to buy time and maintain tissue viability until corrective measures can be implemented or a new blood supply established.

NEOVASCULARIZATION represents an indirect and delayed response to hyperbaric oxygen exposure. Therapeutic effects include enhanced fibroblast division, neoformation of collagen, and capillary angiogenesis in areas of sluggish neovascularization such as late radiation damaged tissue, refractory osteomyelitis and chronic ulcerations in soft tissue.

Hyperoxia enhanced ANTIMICROBIAL ACTIVITY has been demonstrated at a number of levels. Hyperbaric oxygen causes toxin inhibition and toxin inactivation in Clostridial perfringens infections (gas gangrene). Hyperoxia enhances phagocytosis and white cell oxidative killing, and has been shown to enhance aminoglycocide activity. Recent research has demonstrated a prolonged post-antibiotic effect, when hyperbaric oxygen is combined with tobramycin against Pseudomonas aeroginosa.

DIRECT PRESSURE utilizes the concept of Boyle's Law to reduce the volume of intravascular or other free gas. For more than a century this mechanism has formed the basis for hyperbaric oxygen therapy as the standard of care for decompression sickness and cerebral arterial gas embolism. Commonly associated with divers, CAGE is a frequent iatrogenic event in modern medical practice. It results in significant morbidity and mortality and remains grossly underdiagnosed.

Hyperoxia-induced VASOCONSTRICTION is another important mechanism. It occurs without component hypoxia, and is helpful in managing intermediate compartment syndrome and other acute ischemias in injured extremities, and reducing interstitial edema in grafted tissue. Studies in burn wound applications have indicated a significant decrease in fluid resuscitation requirements when hyperbaric oxygen therapy is added to standard burn wound management protocols.

ATTENUATION OF REPERFUSION INJURY is the most recent mechanism to be discovered. Much of the damage associated with reperfusion is brought about by the inappropriate activation of leukocytes. Following an ischemic interval, the total injury pattern is the result of two components: a direct irreversible injury component from hypoxia, and an indirect injury which is largely mediated by the inappropriate activation of leukocytes. Hyperbaric oxygen reduces the

indirect component of injury by preventing such activation. The net effect is the preservation of marginal tissues that may otherwise be lost to ischemia-reperfusion injury.

Indications for Hyperbaric Referral

Standard of Care

Acute Severe Carbon Monoxide Poisoning

- smoke inhalation; cyanide poisoning

Cerebral Arterial Gas Embolism

- decompression or iatrogenically induced

Clostridial Myonecrosis

- gas gangrene

Decompression Sickness

Osteoradionecrosis

- mandible

Adjunctive Therapy

Crush Injury; Compartment Syndrome

- other acute ischemias

Enhancement of Healing
- hypoxic wounds

Exceptional Blood Loss Anemia
- patient refusal of blood; cross matching difficulties

Necrotizing Soft Tissue Infections
- subcutaneous tissue, muscle, fascia

Radiation Tissue Injury
- bone and soft tissue complications

Chronic Osteomyelitis
- refractory to bone cultured antibiotics and surgical debridements

Thermal Burns
- acute management; wound healing support

Treatment Protocols

Oxygen, when breathed under increased atmospheric pressure, is a potent drug. Besides the beneficial effects discussed above, hyperbaric oxygen can produce noticeable toxic effects if administered indiscriminately. Safe time-dose limits have been established for hyperbaric oxygen exposure, and these profiles form the basis for today's treatment protocols. It is only quite recently that disease-specific hyperoxic dosing has been introduced.

Emergency cases, such as carbon monoxide poisoning or cerebral arterial gas embolism may only

require one or two treatments. In those cases for which angiogenesis is the primary goal, as many as 20 to 40 treatments may be necessary. The precise number of treatments will often depend upon the clinical response of each patient. Transcutaneous oximetry can provide more exacting dose schedules, thereby improving cost effectiveness.

With the exception of decompression sickness and cerebral arterial gas embolism, periods of exposure last approximately two hours. Treatments may be given once, twice or occasionally three times daily, and can be provided in both inpatient or outpatient settings.

Delivery Systems

Hyperbaric oxygen therapy is administered in a pressurized chamber. Three distinct types of chambers are available.

Multiplace Chambers - These units can accommodate between 2-18 patients, depending upon configuration and size. They commonly incorporate a minimum pressure capability of 6 atmospheres absolute. Patients are accompanied by hyperbaric staff members, who may enter and exit the chamber during therapy via an adjacent access lock or compartment. The multiplace chamber is compressed on air, and patients are provided with oxygen via and individualized internal delivery system. A dedicated compressor package and high volume receivers provide the chamber air supply.

Space Requirements - Depending upon the size of the complex, a multiplace facility will require between 2,000 and 6,000 square feet of space. Weight constraints dictate that the chamber be ideally located on the ground/basement level. An exception would be to suspend the chamber from the framework of the floor above, if otherwise necessary at an above ground level floor.

Advantages include constant patient attendance and evaluation (particularly useful in treating

evolving diseases such as decompression sickness), and multiple patients treated per session.

Disadvantages include high capitalization and staffing costs, large space requirements and risk of decompression sickness in the attending staff.

Duoplace Chambers -

i. Reneau type (now named Proteus): This system became available during the mid-1980's. The chamber is constructed of stainless steel, and has a pressurization capability of 6 atmospheres absolute. The main compartment accommodates one supine patient. An access lock behind the patient's head accommodates one seated attendant. The chamber is compressed with air, and the patient breathes oxygen by an individualized internal delivery system.

Space Requirements - A single chamber, with related ancillary equipment would fit within 700-800 square feet of space. Add 350-500 square feet of space for each additional chamber, and supportive ancillary equipment.

Advantages include constant patient attendance, with access limited to the head and neck, and a 6ATA pressurization capability.

Disadvantages include relatively high capitalization cost for single patient treatments; risk of decompression sickness in the attending staff.

ii. Sygma II type: This system was introduced in the late 1980's. It is constructed of acrylic and steel, with a pressurization capability of 3 atmospheres absolute. Configuration is for one supine or two seated patients. Constant patient attendance is available via an access lock during single patient treatments. As before, the chamber is compressed with air, and oxygen is delivered by an individualized internal delivery system.

Advantages include two patients per compression (if the patient(s) condition permits) and constant patient attendance.

Disadvantages include risk of decompression sickness in attending staff and relatively high capitalization costs per patient treatment when compared to the monoplace chamber.

Monoplace Chambers - These units, first introduced in the 1960's are designed for single occupancy. They are constructed of acrylic, have a pressure capability of 3 atmospheres absolute, and are compressed with 100% oxygen. Recent technical innovations have allowed critically-ill patients to undergo therapy in the monoplace chamber. The high flow oxygen requirement is supplied via the hospital's existing liquid oxygen system.

Space Requirements - A single unit could operate effectively within approximately 400-500 square feet of space. A two-chamber program will operate most effectively in approximately 800-1,200 square feet of space.

Advantages include most cost efficient delivery of hyperbaric oxygen (capitalization and operating costs), and essentially no risk of decompression sickness.

Disadvantages include relative patient isolation and increased fire hazard.

absence seizure

A 9 year old boy was Dx with absence seizure. the patent asked you about the long term prognosis.

It is a benign seizure. Majority end by age 20. Very few convert to other forms of seizure

A 23-year-old, previously healthy woman presents with jaundice, confusion, and fever. Initial physical examination is unremarkable except for scattered petechiae on the lower extremities, scleral icterus, and disorientation on mental status examination. Laboratory examination discloses the following: hematocrit, 27 percent; white cell count, 12,000/L; platelet count, 10,000/L; bilirubin, 85 mol/L (5 mg/dL); direct bilirubin, 10 mol/L (0.6 mg/dL); urea nitrogen, 21 mmol/L (60 mg/dL); creatinine, 400 mol/L (4.5 mg/dL). Red blood cell smear discloses fragmented red blood cells and nucleated red blood cells. Prothrombin, thrombin, and partial thromboplastin times are all normal.

The most effective and appropriate therapeutic maneuver is likely to be

A plasmapheresis

B administration of aspirin

C administration of high-dose glucocorticoids

D administration of high-dose glucocorticoids plus cyclophosphamide

E splenectomy

The answer is A

This young woman is suffering from a combination of hemolytic anemia with fragmented red cells in the absence of disseminated intravascular coagulation (DIC), thrombocytopenia, fever, mental status changes, and renal dysfunction, which is essentially pathognomonic of thrombotic thrombocytopenic purpura (TTP). The etiology of TTP is unknown, though immunologic and primary vasculopathic phenomena have been associated with this disorder. Pathologically, arteriolar hyalinization, which is also seen in DIC, may be noted. Seventy percent of patients with TTP improve with exchange transfusion or plasmapheresis. Glucocorticoids, antiplatelet agents, splenectomy, and vincristine have been of benefit to subsets of patients, but each is less effective and probably associated with a greater risk than therapeutic plasmapheresis.

it's gamma-hydroxybutyrate

It's called liquid ecstasy- an endogenous short-chain fatty acid. Often associated with date rape/"raves".
Intoxication presents with cerebellar features/myoclonus/coma.
It's not detected with standard screen.

Standard Toxic Screen..

A toxicology screen checks a person's blood or urine or both for the presence of drugs or other toxic substances. The screen can determine the type and amount of drugs or other toxic substances a person may have swallowed, injected, or inhaled. The substances, drugs, or medications detected in the bodily fluids or "screened for" can be legal or illegal.

A healthcare provider may order this test to evaluate for drug overdose, poisoning, or drug abuse. An employer may order the test when drug use may pose a threat to work performance or might

endanger others. This test is used to find the causes of acute drug poisoning. The tests can be used for legal proceedings too.

Normal values for toxicology screens depend on the institution performing the tests. In general, the following values apply: · There should be no illegal drugs in the blood or urine. · There are acceptable levels for over-the-counter medications. These are called therapeutic levels. · There should be no alcohol. · Cigarette smoking may affect some test results. · The presence of nonprescription drugs may show unapproved drug use. · Specific tests can show the drug used. · High alcohol levels may show intoxication.

Commonly abused drugs that may be detected in the urine include: marijuana, or pot · cocaine · phencyclidine, or PCP · amphetamines · morphine, heroin, and codeine · barbiturates

If the test is used as a drug screen there is a finite amount of time after ingestion that the drug or any of its metabolites can be detected:

cocaine
2 to 4 days
amphetamines
24 to 48 hours
heroin
1 to 2 days
morphine
1 to 2 days
phencyclidine (PCP)
1 to 8 days
alcohol
3 to 10 hours
benzodiazepines
up to 6 weeks with high level use

hydromorphone
1 to 2 days
tetrahydrocannabinol (THC)
6 to 11 weeks with heavy use
propoxyphene
6 to 48 hours
methadone
2 to 3 days
codeine
1 to 2 days
barbiturates
up to 6 weeks

What abnormal results mean:
The presence of illegal drugs or drugs not prescribed for the person indicates illicit drug use.

Elevated levels of alcohol or drugs can indicate intentional or accidental intoxication and/or overdose.

Carboxyhemoglobin results from the union of hemoglobin and carbon monoxide. Elevated levels may indicate carbon monoxide poisoning.

Methemoglobin results from the oxidation of ferrous iron to ferric iron. Elevated levels may indicate the use of chemicals and drugs such as aniline, chlorates, nitrates, nitrites, phenacetin, or sulfonamides, or may exist as a primary condition.

Sulfhemoglobin results from the combination of hemoglobin with certain drugs such as phenacetin or sulfonamides; it causes cyanosis (blueness of the skin) but few other symptoms.

Commonly found substances on a toxicology screen include:

alcohol
amphetamines
benzodiazepines
antidepressants
barbiturates and hypnotics
hemoglobin derivatives
isopropanol -- isopropyl alcohol, rubbing alcohol
methanol -- methyl alcohol, found in antifreeze and other substances (toxic)
narcotics
non-narcotic analgesics
acetaminophen - oral
anti-inflammatory analgesics - oral
phenothiazines (antipsychotic or tranquilizing medications)
prescription medications, any type

An 80-year-old Asian woman is hospitalized with weight loss, generalized weakness, and a pulmonary mass. Work-up reveals that she has pulmonary tuberculosis. Her family approaches the physician and asks that the patient not be told, stating that in her upbringing in mainland China tuberculosis was considered fatal and to tell her would be like giving her "a death sentence."
Should you respect the family's concerns?

This is an interesting cultural issue which often arises in treating migrant population. The principle of full disclosure is applicable in these groups too.
At the same time, sensitive handling/empathizing with patient's anxiety is also essential. A conservative approach will be educating the patient about the illness and it's curability with pschosocial consult if needed

This exam is American (USMLE)exam. So we answer according the medical guidelines of this country. Having said that, it is important to respect
other cultural values, especially the Chinese patient and the patient's family involved. For example, native American Indian population have their 'medicine' man. They rely on him heavily. If a physician can accomodate him without compromising patient care, it should be done so. Here, the physician need to talk with involved family involved and eventully inform patient in such a way not to shock her.

Some cultures hold different beliefs about truth-telling in the medical encounter. Some assert that in some Asian cultures, members of the family unit may withhold the truth about terminal illness from elders out of respect and a desire to protect them from harm. If a patient and their family members hold such beliefs, they should be respected, and a mechanism for informed decision making in collaboration with the family negotiated. One must not, however, assume that every patient of Asian ancestry holds the beliefs described here. The physician should make an attempt to explore the patient's belief system. If he finds that the patient does hold such beliefs about the harmful nature of truthful disclosure of the truth, then it would be justifiable to withhold the diagnosis of tuberculosis.

A 28-year-old woman who uses oral contraceptives comes to the emergency room because when she looked in the mirror this morning, her face was twisted. It felt numb and swollen. While eating breakfast, she found that her food tasted different and she drooled out of the right side of her mouth when swallowing. Neurologic examination discloses only a dense right facial paresis equally involving the frontalis, orbicularis oculi, and orbicularis oris. Finger rubbing is appreciated as louder in the right ear than in the left. The physician should

A: instruct the patient in using a patch over the right eye during sleep
B: recommend that she discontinue the use of oral contraceptives
C: order brainstem auditory evoked potentials to assess her hearing asymmetry
D: inform her that her chances of substantial improvement within several weeks are only about 40 percent
E: order an echocardiogram to rule out mitral valve prolapse as a source of emboli

The answer is A
The abrupt appearance of an isolated peripheral facial palsy, which may include ipsilateral hyperacusis resulting from involvement of fibers to the stapedius and loss of taste on the anterior two-thirds of the tongue resulting from involvement of the fibers of the chorda tympani, is most often idiopathic, as in Bell's palsy. If the patient is unable to close the eye, artificial tears may be helpful during the day to prevent drying, and the eye should be patched at night to prevent corneal abrasion. Excellent recovery occurs in 80 percent of these cases. Oral contraceptives and

mitral valve prolapse are not associated with the causes of this clinical picture. Evoked potentials are not helpful diagnostically.

A 14-year-old boy is brought to the walk-in clinic by his father late on Saturday afternoon because his left ear is swollen and painful. The boy's ear has been black and blue since he injured it in a wrestling match 3 days ago.
Symptoms have increased significantly following a repeat injury 3 hours ago. On physical examination, his left ear is markedly swollen and tender to palpation. The most appropriate next step is to

(A) reassure him and start aspirin therapy
(B) reassure him and start codeine therapy
(C) recommend that he apply cold packs to the ear for the next 12 hours
(D) recommend that he apply hot packs to the ear for the next 12 hours
(E) refer him to a surgeon for immediate drainage of the lesion

E

this question is from usmle booklet....I dont have explaination

For a pregnant woman in the 26th week of gestation who tested positive for Streptococcus B you should start the treatment:
a.right away
b.one week before delivery
c.24 hours before delivery
d.during delivery

D

Physicians who culture for GBS carriage during prenatal visits should do so late in pregnancy (35-37 weeks' gestation); cultures collected earlier do not accurately predict whether a mother will have GBS at delivery.

A positive culture result means that the mother carries GBS -- not that she or her baby will

definitely become ill. Women who carry GBS should not be given oral antibiotics before labor because antibiotic treatment at this time does not prevent GBS disease in newborns. An exception to this is when GBS is identified in urine during pregnancy. GBS in the urine should be treated at the time it is diagnosed. Carriage of GBS, in either the vagina or rectum, becomes important at the time of labor and delivery when antibiotics are effective in preventing the spread of GBS from mother to baby.

Most GBS disease in newborns can be prevented by giving certain pregnant women antibiotics through the vein during labor. Any pregnant woman who previously had a baby with GBS disease or who has a urinary tract infection caused by GBS should receive antibiotics during labor.
Pregnant women who carry GBS should be offered antibiotics at the time of labor or membrane rupture.

You diagnose acute pancreatitis in a 45-year-old white male. As you initiate therapy and closely monitor his progress, which one of the following complications is most likely to develop?

a.Hypomagnesemia
b.Hypoglycemia
c.Hypercalcemia
d.Acute hypertension

A

Treatment strategies for pancreatitis vary somewhat and are related to the degree of inflammation. In patients with mild pancreatitis, a therapeutic regimen of avoidance of oral intake, intravenous hydration, and analgesia usually suffices.
However, patients with more severe pancreatitis are likely to develop significant complications, and require closer monitoring. Patients with hypotension and vascular instability frequently require massive fluid resuscitation. Patients with metabolic complications such as hyperglycemia, hypocalcemia, or hypomagnesemia may require insulin, calcium, or magnesium supplementation.

Immediate gastric lavage is contraindicated in treating acute ingestion of which one of the following?

A.Salicylates
B.Strychnine
C.Ethanol

D.Acetaminophen

E.Phenothiazines

B

Ten to 30 minutes after ingestion of strychnine, untoward symptoms begin. Often without any warning the patient falls into violent convulsions. Gastric lavage is postponed until treatment designed to prevent the convulsions is started. Initiation of gastric lavage as soon as possible is indicated in treating poisoning by salicylates, ethanol, acetaminophen, and phenothiazines.

What are the current treatment guidelines for syphilis in HIV-related disease?

There has been much discussion of what constitutes adequate chemotherapy for syphilis in HIV-infected patients. The present recommendation is to use 2.4 million units of procaine penicillin daily for 10 to 14 days, with oral probenicid or IV penicillin for 10 days. Ceftriaxone 2g daily for 10 days has been proposed as an alternative, and the results of a comparative trial of standard IV penicillin versus IV ceftriaxone are currently under analysis. Because benzathine penicillin does not achieve treponemicidal levels in the CSF, it should not be used for treatment of neurosyphilis. If compliance with therapy follow-up for serologic testing is likely to be problematic, supervised

in-patient treatment may be the only certain way to ensure delivery of adequate amounts of antibiotic.

Which two groups of individuals are at risk for contracting atypical measles?

Repicients of the killed measles vaccine used three decades ago and immunocompromised individuals are most likely to develop the infection.
Atypical measles is a form of natural measles infection affecting those who previously received killed measles virus vaccine. The atypical measles syndrome is characterized by high fever, pulmonary infiltrates, and either no rash or an unusual rash that causes swelling and pain in the hands and feet. The disease may be confused with meningococcemia or rickettsial diseases.

Which immunizations are routinely recommended for HIV-infected patients?

Live virus or live bacteria vaccines, with the exception of the measles-mumps-rubella vaccine (MMR), should not be given to HIV-infected individuals. Although it is a live virus vaccine, the MMR vaccine is considered safe for HIV-infected patients, and the indications for administration are the same as in immunocompetent adults. All other live vaccines are contraindicated, including BCG, oral polio vaccine, oral typhoid vaccine (Ty21a), varicella-zoster vaccine, and yellow fever vaccine. If polio vaccination is indicated for HIV-infected individuals or their household contacts, the enhanced-potency inactivated polio vaccine (eIPV) should be used.
The pneumococcal polysaccharide vaccine is considered the standard of care because of the high incidence of pneumococcal pneumonia and bacteremia associated with HIV disease. The influenza vaccine should be considered to prevent influenza and its potential complications (primarily bacterial pneumonia) and to prevent clinical syndromes that may mimic more serious opportunistic infections. Although the data are conflicting, there is some evidence that influenza vaccination leads to a transient rise in viral load.

Following screening for past exposure, hepatitis B vaccine should be offered to HIV-infected injection drug users; sexually active gay men; prostitutes; sexually active heterosexual men and women with STDs or more than one partner in the past 6 months; and household or sexual contacts of HBsAg carriers. Hepatitis A vaccine can be given safely to HIV-infected patients at risk -- primarily those with negative anti-HAV IgG who are traveling to an endemic area, sexually active gay men, injection drug users, or those exposed to a community outbreak. Authorities differ on whether Haemophilus influenza type-B vaccine should be offered. Recommendations for the tetanus-diphtheria (dT) vaccine do not differ from those for immunocompetent adults.

when should antiretroviral therapy be initiated in an asymptomatic HIV-infected individual?

This is new.
The latest edition of the DHHS guidelines, published in February 2001, proposes that treatment should be delayed until the CD4+ cell count is less than 350 cells/mm3 or viral load is greater than 55,000 (by reverse transcriptase-polymerase chain reaction [RT-PCR]) or 30,000 copies/mL (by branched DNA).

Sources:www.medscape.com and http://hivatis.org

I know in washington manual its different....but washington manual also suggested http//hivatis.org..

A 64-year-old white man comes to the clinic because of chest pain for the past 2 months. He has had intermittent episodes of substernal pain that occur at various times of the day and last 5 to 10 minutes. Physical examination is normal as is an
electrocardiogram. The next step in evaluating his symptoms should be to order

(A) chest x-ray film
(B) echocardiography
(C) exercise stress test
(D) upper gastrointestinal endoscopy
(E) 24-hour monitoring of cardiac rhythm

C

This question is from usmle booklet.
An exercise stress test is a valuable diagnostic and screening procedure primarily used to detect coronary artery disease. Exercise may induce ischemia (inadequate supply of blood) due to coronary artery disease that is not present at rest. It is usually done for one of the following reasons:

* to screen for the presence of undiagnosed coronary heart disease, especially in individuals with one or more unfavorable coronary risk factors (cigarette smoking, hypertension, elevated cholesterol, family history of coronary heart disease at a young age, or diabetes), or in an individual with other known atherosclerotic impairments

* to evaluate an individual with chest pain

An 18-year-old woman comes to the clinic because she has missed two menstrual periods. She says she has not been sexually active. The pelvic examination is difficult because she is tense and complains of pain throughout the examination. The most appropriate next step is to

(A) arrange pelvic ultrasonography
(B) do urine pregnancy test
(C) determine serum follicle-stimulating hormone (FSH) and luteinizing hormone (LH) concentrations
(D) prescribe medroxyprogesterone, 10 mg orally every day for 10 days
(E) reassure her that this is normal for her age, but she should return in 3 months if her periods do not resume

B

Benign Prostatic Hypertrophy

Cause.
Benign prostatic hypertrophy (BPH) rarely affects men <40 years of age, with symptoms

generally beginning between 60 to 65 years of age.

Clinical Presentation.

Signs and symptoms include decreased force and caliber of urinary stream, hesitancy, retention, postmicturition dribbling, double voiding (patient voids and is able to void again in 5 to 10 minutes), and overflow urinary incontinence (on straining or coughing). Irritative symptoms such as dysuria, frequency, nocturia, urgency, hematuria, and incontinence occur frequently. Flank pain during micturition, suprapubic pain, and azotemic symptoms occur less commonly.

Exam. The bladder may be distended, and the prostate is enlarged, smooth, and symmetric. The prostate gland may be soft or firm and possibly nodular. However, the nodules lack the stony-hard consistency associated with carcinoma.

Laboratory findings. UA may reveal signs of infection. If the obstruction has been severe enough to impair renal function, BUN and creatinine may be elevated. PSA may be elevated.

Radiographic findings. IVP may show upper tract or bladder changes secondary to obstruction (hydroureteronephrosis, bladder trabeculation and thickening, bladder diverticula or calculi). VCUG may be indicated. Postvoid catheterization will reveal residual urine. Order an ultrasonogram with rectal probe and biopsies if indicated, to rule out carcinoma. Cystoscopy if indicated.

Uroflowmetry. It is the most frequently used and most informative though nonspecific method of diagnosing bladder neck obstruction. Maximum flow rate should be >15 ml/sec. Flow rate of <10 ml/sec usually indicates infravesical obstruction.

Postvoid residual urine. It is a useful tool for follow-up and evaluation of response to therapy.

Pressure flow studies. These are indicated in patients with normal peak flow rates but with symptoms suggestive of infravesical obstruction and patients with symptoms suggestive of bladder voiding dysfunction.

Treatment.

Men with mild symptoms may be managed by watchful waiting. Those with moderate symptoms may be managed by medical treatment. Those with severe symptoms are candidates for surgical treatment. An indwelling Foley catheter may help acute episodes but is only a temporary

measure.
Medical measures. Terazosin 1 to 2 mg/day is often helpful in relieving symptoms. Tamsulosin 0.4 to 0.8 mg/day may be helpful, but it is more expensive. Finasteride (Proscar) 5 mg PO QD blocks transformation of testosterone to 5a-dihydrotestosterone. Shrinks prostate tissue but may take 6 to 12 months to have a clinical effect. Hyper- trophy recurs on stopping drug. Recent data indicate that finasteride may be no better than placebo at relieving symptoms of benign pros-tatic hypertrophy.
Surgical measures. Transurethral prostatectomy (TURP) is the gold standard surgical treatment, but it should not be performed in patients who want to remain fertile. There is a significant incidence of incontinence and impotence following TURP.
Antibiotics should be used to control infection when indicated.
If exam reveals nodularity of the gland, referral to a urologist is indicated.

A 54-year old woman complains of hot flashes and night sweats. Her last menstrual period was 2 years ago. She also has migraine headaches and a family history of breast cancer via her maternal aunt. What is the appropriate treatment for her?

A: Hysterectomy.
B: Endometrial Biopsy.
C: Medroxyprogesterone Acetate.
D: Estrogen Cream.
E: Estrogen and Progestin therapy.

Answer is C.

This 54-year old woman has vasomotor instability and needs hormonal replacement. Because she has two contraindications to estrogen therapy; migraine headaches and a family history of breast cancer, Medroxyprogesterone acetate is the best treatment of choice. Even though it is less effective than estrogen, it still can offer symptomatic relief.

There is no indication for an Endometrial Biopsy in this patient. A Hysterectomy is the treatment for a woman with early stages of endometrial cancer.

A 68-year old female with a history of chronic constipation presents to the emergency room with a two day history of abdominal pain and fever. The patient states that she has not wanted to eat for 3 days and she has vomited several times today with several episodes of diarrhea. She has a history of a myocardial infarction six years ago and is concerned because she was feeling some palpitations over the past 24 hours. She has no history of prior abdominal surgeries and only takes sublingual nitroglycerin as needed. Physical examination is notable for a thin female, who appeared older than her stated age. Temperature was 101.5, blood pressure - 110/70, heart rate-112, and respiration rate is 14.

HEENT; normal, no JVD, mucus membranes were dry. Cardiac- tachycardic, regular rate, Lungs-clear, Abdominal exam- a distended abdomen with minimal bowel sounds, she is tender in the left lower quadrant with the suggestion of a mass. She does not have rebound or guarding. Rectal exam confirms a fullness in the left lower quadrant and reveals guaiac negative stool. All of the following are reasonable treatment modalities given the patients clinical presentation, EXCEPT:

A: IV hydration.

B: Nothing by mouth.

C: Nasogastric tube.

D: Immediate surgery.

E: CT scan.

Answer is D.

This is a very typical case scenario in the real world. An elderly patient with a history of prior medical problems and of course constipation presents with worsening abdominal complaints. Once it is ascertained that the patient does not have an acute abdomen, the differential and further diagnostic studies can be pursued- if the patient had an acute abdomen it would not matter if she had a perforated colon carcinoma or diverticulitis, she would need immediate surgical therapy. The differential in this patient should at the very least include ovarian torsion, ischemic colitis, diverticulitis, sigmoid volvulus and colon carcinoma.

Since this patient did not have focal peritoneal signs- immediate surgery is not needed and further evaluation would be helpful- CT scan. In the interim, making the patient NPO, restoring the extracellular fluid deficits, and placing an NGT for gastric decompression are all prudent measures. Once the CT scan rules out a mass lesion in the sigmoid colon the diagnosis of diverticulitis becomes more likely. In this case, initial conservative treatment consisting of IV antibiotics and observation is reasonable.

Autopsies and radiologic studies reveal that 35-50% of patients have diverticular disease. The

incidence is directly related to the patient's age-- <5% at the age of 40, 30% by the age of 60 and > 65% in patients older than 85. The incidence is also higher in industrialized countries and probably is related to the higher incidence of low fiber diets. Only 10-25% of patients with diverticula develop symptomatology of diverticulitis and another 15% develop bleeding complications. Patients with mild symptoms can be treated conservatively with good results. However, patients that present with a free abdominal perforation require immediate surgery and can have up to a 20% mortality. After the first attack only one third will have a second attack, although another 30-40% will have vague symptoms. After a second attack, only 10% will remain symptom free and this becomes another indication for surgical intervention.

A 58-year old man with a history of chronic bronchitis and tobacco use presents to the Emergency Room with a 2-day history of a 3 cm. groin mass and a 12-hour history of nausea and vomiting. He denies any prior abdominal surgeries. Examination reveals a firm, tender left groin mass which is not mobile. The scrotum, testis, and penis were all normal. Abdominal X-rays reveal multiple air fluid levels. The most likely diagnosis is:

A: Metastatic lung cancer to the inguinal nodes.
B: Incarcerated inguinal hernia.
C: Viral gastroenteritis with inguinal adenopathy.
D: Spigelian hernia.
E: Undescended testis.

Answer is B.

This is a surgical emergency. This patient is presenting with an incarcerated hernia and a small bowel obstruction. He must be taken to the operating room immediately for reduction of the hernia and relief of the bowel obstruction before the incarcerated bowel becomes gangrenous. An untreated inguinal hernia may become incarcerated if a loop of bowel or piece of omentum descends through the abdominal wall defect and cannot return to the peritoneal cavity. Subsequent venous congestion leads to edema and eventually arterial compromise to the incarcerated structure. Sometimes incarcerated hernias present early before this edema and are able to be reduced with manipulation and sedation. In this case the immobility and firmness of the mass suggests that this will not be possible and surgical reduction is the only alternative. A spigelian hernia is a lateral ventral wall defect. A normal testis examination rules out an undescended testis and would not account for his gastrointestinal symptoms. Air fluid levels on the x-ray are consistent with a bowel obstruction and should not be seen with gastroenteritis.

Which one of the following depressed patients is most likely to commit suicide?

a.A 26-year-old male who repeatedly denies any thoughts of suicide
b.A 30-year-old female who has been hospitalized overnight on several occasions for attempted suicide
c.A 50-year-old recently divorced alcoholic male who feels life is hopeless
d.A 50-year-old female who thinks of suicide and fears she might act on her thoughts

C

Assessment of suicidal risk is critical in determining the need for and duration of hospitalization of depressed patients. Most suicides are planned, not impulsive, and carried out successfully most often by the elderly, males, those in poor health, alcoholics, schizophrenics, those who have recently lost a loved one (especially a mate), and those suffering from depressive disorders. Many depressed patients think about suicide, and a physician should take these patients seriously; however, among this group of patients, the 50-year-old recently divorced alcoholic male has the highest risk of successful suicide.

Suicide took the lives of 30,575 Americans in 1998 (11.3 per 100,000 population).

More people die from suicide than from homicide. In 1998, there were 1.7 times as many suicides as homicides.

Overall, suicide is the eighth leading cause of death for all Americans, and is the third leading cause of death for young people aged 15-24.1

Males are four times more likely to die from suicide than are females.1 However, females are more likely to attempt suicide than are males.

1998, white males accounted for 73% of all suicides. Together, white males and white females accounted for over 90% of all suicides.1 However, during the period from 1979-1992, suicide rates for Native Americans (a category that includes American Indians and Alaska Natives) were about 1.5 times the national rates. There was a disproportionate number of suicides among young

male Native Americans during this period, as males 15-24 accounted for 64% of all suicides by Native Americans.

Suicide rates are generally higher than the national average in the western states and lower in the eastern and midwestern states.

Nearly 3 of every 5 suicides in 1998 (57%) were committed with a firearm. (source:CDC

Clear contraindications to the use of thrombolytic agents in the setting of an acute anterior myocardial infarction include all the following EXCEPT

A left carotid artery occlusion with hemiparesis 1 month ago
B transurethral resection of the prostate 1 week ago
C diastolic blood pressure of 110 mmHg during chest pain
D patient age greater than 70
E epigastric pain and melena 1 week ago treated with histamine receptor antagonists

The answer is D
While prompt initiation of thrombolytic therapy during an acute myocardial infarction is

associated with improvement in mortality and limitation of the size of the infarct, all thrombolytic agents, including tissue plasminogen activator, are associated with an increased risk of major bleeding. These agents should not be given if there is a history of a cerebrovascular accident, a surgical procedure within the past 2 weeks, active peptic ulcer disease, or marked hypertension during acute presentation (systolic pressure greater than 180 or diastolic pressure greater than 100 mmHg). Other situations in which the risk of bleeding may be higher, such as advanced age, are not absolute contraindications, but the potential benefit from the administration of thrombolytic therapy should be considered carefully in each case.

A pregnancy is confirmed in a 30 year old woman with an IUD in place. The woman expresses a strong desire to continue pregnancy. The most appropriate course of action is to

a. leave the IUD in place without any other treatment
b. leave the IUD in place and give prophylactic antibiotic
c. remove the IUD immediately
d. terminate pregnancy

Answer is C.
Although there is increased risk of spontaneous abortion, and a small risk of infection, an

intrauterine pregnancy can occur and continue to term with IUD in place but IUD should be removed in an attempt to reduce the infection, abortion, or both.

Pulmonary embolism

EKG
oxygen
pulse oximetry
CXR
iv access
CBC
PT
PTT
ABG
V/Q scan: if +, then anticoagulation: heparin for 1 week + warfarin (coumadin) for 3 month. Check PTT every 4 hours till 1.5 to 2 times control. Keep INR PT 2-3. If V/Q -, then duplex ultrasound of lower extremity for DVP. If +, anticoagulation, if -, pulmonary angiography.
If bleeding occur, stop heparin and warfarin, put inferior vena cava filter
consider thrombolytiic therapy (tPA or streptokinase) if massive PE who are hemodynamically unstable.
Embolectomy if thrombolytic therapy fail or is contraindicated.

Addition. Interpretation of V/Q Scan

Yes patient should be hospitalized..

Interpretation of V/Q Scan

Scan.High probability
Clinical. High or intermediate
Probability. 96% +
Managegment. Treat for PE

Scan.Medium probability
Clinical. Low
Probability. 12%
Management. *Need further evaluation

Scan.Medium probability
Clinical. Intermediate
Probablity. 33%
Management. *Need further evaluation

Scan.Low probability
Clinical. High
Probability. 16%
Management. *Need further evaluation

Scan.Low probability
Clinical. Low
Probability. 4% <
Management. No PE

Normal
Clinical. Low
Probability. 2%
Management. No PE

NOTE: Any other combination of results is not helpful and patients should have other testing.
*Start with Doppler of a swollen leg and then angiography if Doppler is negative

Hyperthermia

Hyperthermia. Hyperthermia results from an imbalance in heat production, dissipation. Predisposing factors include dehydration, chronic illness, old age, alcohol, alteration in skin function (scleroderma etc.), drugs including anticholinergics, phenothiazines, tricyclic antidepressants, MAO inhibitors, amphetamines, and succinylcholine. Think also of thyroid storm.

Malignant hyperthermia.
Causes: 1:20,000 in response to a muscle-relaxing agent (such as succinylcholine) or an inhaled anesthetic (such as halothane). Is hereditary. May also be secondary to physical or emotional stress.
Characteristics. Hyperthermia, muscle rigidity, tachycardia, acidosis, shock, coma, rhabdomyolysis.
Treatment includes IV dantrolene 1 to 10 mg/kg IV titrated to effect, management of acidosis and shock, peripheral cooling (see management of heat stroke below).

Neuroleptic malignant syndrome.
Cause. Neuroleptics (phenothiazines, etc.)

Characteristics. Same symptoms as malignant hyperthermia but generally develops over days instead of minutes.
Treatment. As per malignant hyperthermia.

Serotonin syndrome.
Cause. Serotonin excess. Generally secondary to combination of MAO and SSRI or rarely to excess SSRI ingestion.
Characteristics. Rapid development of fever, hypertension, muscle rigidity, decreased mental status. Much more rapid onset than neuroleptic malignant syndrome.
Treatment. Treat like malignant hyperthermia (above). Cyproheptadine, a serotonin antagonist, 4-8mg has been effective in case reports. Also diazepam in 5 mg aliquots IV for muscle spasm, intubation as needed, cooling blankets, acetaminophen. Treat hypertension as per malignant hypertension.

Heat cramps.
Cause. Strenuous physical activity.
Characteristics. Skeletal muscle cramps, profuse sweating, hyponatremia secondary to free water intake, normal body temperature.
Treatment. Rest, oral or IV rehydration.

Heat exhaustion.
Cause. Secondary to sweating, volume depletion, tissue hypoperfusion.
Characteristics. Fatigue, light-headedness, nausea, vomiting, headache, tachycardia, hyperventilation, hypotension, normal or slightly elevated temperature, profuse sweating.
Treatment. Rest, rapid IV fluid replacement (1 to 2 liters of NS or more).

Heat stroke.
Cause. Volume depletion, sweating, etc.
Characteristics. Hyperpyrexia (often >40° C [106° F]), Patient may be sweating or may be dry, and have loss of consciousness or alteration in mental status (hallucinations, bizarre behavior,

status epilepticus, other neurologic symptoms).
Treatment. This is a true emergency. Check and follow labs including electrolytes, CBC twice a day, liver enzymes, CPK (may develop rhabdomyolysis), and clotting studies. Remove clothing; apply water to skin and fan to promote evaporative heat loss. (Avoid inducing shivering and peripheral vasoconstriction with ice. Shivering can be controlled with diazepam IV or chlorpromazine or meperidine.) Treat with fluids (but many do not have significant fluid deficits; be cautious), cooling blankets.

Pneumonia: Empiric Treatment Based on Patient Population

Empiric Treatment Based on Patient Population

Neonates <5 days old. Caused by maternal vaginal flora, including Group A and B Streptococcus, E. coli, Chlamydia, Treponema. Treat with ampicillin and gentamicin or third-generation cephalosporin.

Neonates (5 days to 1 month). Group A or B Streptococcus, S. aureus, E. coli, Chlamydia. Treat with penicillinase-resistant penicillin (nafcillin). Consider vancomycin if MRSA is prevalent. For cough and infiltrates without a fever, consider Chlamydia trachomatis even in the absence of conjunctivitis. These children should be treated with a macrolide.

Children (1month to 5 years). 80% of mild-to-moderate cases are viral. Bacterial causes include pneumococcus, H. influenzae, also chlamydia or Mycoplasma. Treat with extended spectrum macrolide for outpatients (e.g., clarithromycin, azithromycin). Consider third-generation cephalosporin ± aminoglycoside for inpatients.

Children over 5 years. Same as adults without comorbid factors.

Adult outpatients without comorbid factors. Most common agents are pneumococcus, Mycoplasma, Chlamydia pneumoniae. Treat with macrolide (tetracycline if intolerant). Must also cover H. influenzae in smokers, so use extended spectrum macrolide (azithromycin or clarithromycin).

Adult outpatients with comorbid factors (smoking, age >60, diabetes, emphysema, heart disease, etc). If multiple comorbid factors, consider inpatient treatment. Common etiologies same as those without comorbid factors, but increased prevalence of gram-negative rods and Moraxella. Treat with TMP/SMX + macrolide or Augmentin + macrolide. Extended spectrum macrolide or extended spectrum fluoroquinolone (e.g., levo-floxacin) may be used as monotherapy.

Adult inpatients not requiring ICU. Similar organisms but increased incidence of Legionella and gram-negative rods. Treat with third- generation cephalosporin + macrolide, beta-lactam with inhibitor + macrolide. Consider monotherapy with extended spectrum macrolide (azithromycin IV) or extended spectrum fluoroquinolone (e.g., levofloxacin).

Adult inpatients requiring ICU. Most common agents are pneumococcus, gram-negative rods, and Legionella. Mycoplasma in elderly. Therapy includes a macrolide plus a third-generation cephalosporin. Consider adding an aminoglycoside to cover gram-negative rods especially if the patient is hypotensive.

Adult, hospital-acquired pneumonia. As patients remain in the hospital, the oropharynx become increasingly colonized with gram-negative rods and MRSA. Therefore, for hospital acquired pneumonias that develop within the first 2-5 days after admission, treat with a third-generation cephalosporin or fluoroquinolone. After this, aggressive gram-negative rods are common so treat with two anti-pseudomonal agents (aminoglycoside or ciprofloxacin + antipseudomonal beta-lactam like piperacillin, piperacillin-tazobactam, imipenem), consider adding vancomycin for MRSA.

Evaluation of the Chronic Cough

Most common causes in order of frequency.
Postnasal drip/chronic sinusitis, asthma, including postviral reactive airways, GE reflux disease. Consider also medication (ACE inhibitors), CHF, pertussis, TB. Pertussis in adults may present only with chronic cough and may be present despite childhood immunization and represent 21% of those with chronic cough in one series (check acute and convalescent titers).

One Approach.
Treat with antihistamine or decongestant empirically. Consider course of antibiotics for sinusitis if appropriate.
If positive titer for pertussis, treat with erythromycin or other macrolide.
If this fails, do bronchoprovocation testing for asthma and treat patients with positive results with beta-agonists and prednisone (if fail, beta- agonists alone).
If cough continues or bronchoprovocation is negative, do CXR and sinus CT. Treat positives.
Evaluate negatives for GE reflux and give trial of H2-blocker.
If patient still coughing, consider bronchoscopy.
This approach leads to successful treatment in 96% (though there are recurrences).

A 58-year-old man seeks attention in the emergency department for weakness and melena, which he has had for 3 days. He says he has not had significant abdominal pain and had no prior gastrointestinal bleeding. On examination he is disheveled and unshaven, appears older than his stated age, and has a 20 mmHg orthostatic drop in blood pressure. Findings include bilateral temporal wasting, anicteric and pale conjunctivae, spider angiomas on his upper torso, muscle wasting, hepatosplenomegaly, and hyperactive bowel sounds without abdominal tenderness to palpation. Stool is melenic. Nasogastric aspiration reveals "coffee-grounds" material, which quickly clears with lavage. Hematocrit is 30 percent, and mean corpuscular volume is 105 fL. Saline gastric lavage is initiated. The appropriate next step in the management of this man's illness would be to

A perform gastroscopy

B pass a Sengstaken-Blakemore tube and begin an intravenous infusion of vasopressin (Pitressin)

C order an upper gastrointestinal series

D order immediate visceral angiography

E insert a large-bore intravenous line and type and cross-match the man's blood

The answer is E

The presence of coffee-grounds material in a nasogastric aspirate from a person with melena indicates recent bleeding of the upper gastrointestinal tract. In a patient with obvious signs of cirrhosis, esophageal varices must be considered in the differential diagnosis of upper gastrointestinal bleeding; other possible diagnoses include peptic ulcer, gastroduodenitis, esophagitis, and a Mallory-Weiss tear. Before diagnostic procedures such as endoscopy and an upper gastrointestinal series are undertaken, the placement of a large-bore intravenous line and commencement of volume replacement therapy are mandatory to prevent hypotension. Moreover, blood should be typed and cross-matched in case of further bleeding. Diagnostic angiography is indicated only when brisk bleeding prevents diagnosis by endoscopy or barium study.

Which disease could be with high BP in low extremity
than BP in upper extremity?

what is the indication for

1.Intubation.

2.Cardiac catheter.

3.Foley catheter

4.Echocardiagraphy

5.Ejection fraction

6.PTCA

7.CABG

8.Blood transfusion

16yo girl need to do C-section, who will sign the consent form?

She can sign consent form.

Minors have the ethical and legal authority to make medical decisions for themselves when they have reached the legal age of majority or become "emancipated." Most states recognize an emancipated minor as a person who meets one of the following criteria:

self-supporting and not living at home

married

pregnant

a parent

in the military

In addition, most states allow treatment without parental consent for sexually transmitted diseases, pregnancy, and drug or alcohol abuse.

A 46-year-old Haitian man presents with shortness of breath. Chest x-ray reveals a right pleural effusion extending about halfway up the chest. The patient has no other known medical problems and is on no medicines. The rest of the general physical examination is unremarkable. Diagnostic thoracentesis reveals the following: lactate dehydrogenase 1.7 kat/L (100 U/L), glucose 6.4 mmol/L (150 mg/dL), and amylase 1.6 kat/L (90 U/L). Cell count reveals 1000 red cells per microliter and 1000 white cells per microliter (differential: 50 percent neutrophils, 25 percent lymphocytes, and 25 percent monocytes). A ventilation-perfusion lung scan is indeterminate on the right side because of the large effusion, but there are no ventilation-perfusion mismatches elsewhere. The next most appropriate step would be

A:pulmonary arteriogram
B:abdominal CT
C:chest CT
D:needle biopsy of pleura
E:administration of isoniazid with ethambutol

The answer is D
The initial step in the evaluation of a pleural effusion is the determination of the presence of either a transudative effusion, usually caused by congestive heart failure, cirrhosis, or nephrotic syndrome, or an exudative pleural effusion, which may be due to a host of causes. The working definition of an exudative effusion is one that meets any of the following criteria: (1) pleural fluid to serum protein concentration ratio greater than 0.5, (2) pleural fluid to serum lactic dehydrogenase (LDH) concentration ratio greater than 0.6, (3) pleural fluid LDH concentration

greater than two-thirds of the upper limit of normal serum LDH. This patient's effusion is an exudate. Additional studies to be done include measurement of pleural glucose and cultures for bacterial mycobacteria and fungi. If the glucose is less than 60 mg/dL, malignancy, empyema, or rheumatoid pleuritis should be considered. Esophageal rupture, pancreatitis, and malignancy can cause an elevated pleural fluid amylase. If no diagnosis is apparent after the above studies, occult pulmonary embolism should be considered. If there is still no diagnosis based on these studies, it is then appropriate to perform a needle biopsy of the pleura with particular attention to histologic analysis for tuberculosis or cancer.

A 70-year-old man presents with a second episode of painless hematuria. Physical examination is negative for petechiae, purpura, and lymphadenopathy, but the spleen tip is palpable. Peripheral blood smear demonstrates a leukocyte count of 14,000 with no shift, hemoglobin of 14.5 g, and platelet count of 850,000. Partial thromboplastin time was mildly prolonged, with a normal prothrombin time. Cytoscopy demonstrates diffuse oozing from the bladder surface with no evidence of neoplasm.
Which of the following statements about this patient's condition is not true?

a. Elevated leukocyte alkaline phosphatase, serum B12, and unbound B12 binding capacity in the presence of a hypercellular bone marrow fulfill the diagnostic criteria.
b. Panmyelosis may evolve through a proliferative phase to a myeloid metaplasia phase to a leukemic phase, which is resistent to therapy.
c. Therapeutic options include phlebotomy, which may be associated with increased incidence of thrombotic events, chemotherapy with hydroxyurea, or radiophosphorus, which is contraindicated in elderly patients.

d. Bleeding may be related to platelet dysfunction or coagulation abnormalities, which may improve as the erythrocyte mass is lowered.
e. The patient's prior history of peptic ulcer disease and gout may be due to the myeloproliferative disorder.

A

i think this is a case of a myeloproliferative disorder. the option a, is diagnostic of leukemia, whereas the other options are indicative of the patient suffering from polycythemia although the pts hb in normal, but one has to note that his hb is normal despite of 2nd episode of painless hematuria. The pt does have thrombocytosis but it is not primary thrombocytosis since the spleen tip is palpable. i personally think he has relative polycythemia with essential thrombocytosis. As far as option he is concerned yes PUD and gout maybe indiactive of prior disorder since malignancies cause increase uric acid production and the pt maybe have prescribed aspirin for thrombocytosis giving rise to PUD. I am not sure if this makes sense to anyone but it was the only logical thing i could come up with.

sorry, i did check the Merck Manual on this one. As per them choice a does fulfill the diagnostic criteria, Also options b, d and e are also mentioned in the article however as far as treatment goes, they say that radioactive pohophorus is the treament of choice in elderly whereas the (c) options says radio. P is contraindicated in the elderly so i am confused as well. Please see the attachement from merck manual below if anyoone is interested.
Also, Mark from where did u get this Q?

Polycythemia Vera

Incidence and Pathophysiology

Polycythemia vera (PV) occurs in about
5/1,000,000 persons, more often in males
(about 1.4:1). The mean age at diagnosis is 60
yr (range, 15 to 90 yr; rarely in childhood); 5% of patients are < 40 yr at onset.

The bone marrow sometimes appears normal but usually is hypercellular; hyperplasia involves all marrow elements and replaces marrow fat. There is increased production and turnover of RBCs, neutrophils, and platelets. Increased megakaryocytes may be present in clumps. Marrow iron is absent in > 90% of patients, even when phlebotomy has not been performed.

Studies of women with PV who are heterozygous at the X-chromosome-linked locus for G6PD have shown that RBCs, neutrophils, and platelets have the same G6PD isoenzyme, supporting a clonal origin of this disorder at a pluripotent stem cell level. The cause of this proliferation is unknown.

Eventually, about 25% of patients have reduced RBC survival and fail to adequately increase erythropoiesis; anemia and myelofibrosis develop. Extramedullary hemopoiesis occurs in the spleen, liver, and other sites with the potential for blood cell formation.

Symptoms and Signs

Some patients are asymptomatic and are first identified on routine blood examination.
Complaints
(weakness, headache, light-headedness, visual disturbances, fatigue, dyspnea) usually can be attributed to expanded blood volume and hyperviscosity. A bleeding diathesis is common.
Pruritus
often occurs, particularly after a hot bath. The face may be red and the retinal veins engorged. Hepatomegaly is common, and > 75% of patients have splenomegaly (which may be massive, extending to the pelvic brim); a friction rub may be heard if splenic infarction occurs. Patients

may
present with peptic ulcer disease, thrombosis, Budd-Chiari syndrome, or bone pain.
Complications of hyperuricemia (eg, gout, renal calculi) tend to occur later in PV.

Eventually, erythroid activity in the marrow decreases. Immature WBCs and RBC precursors are found in the peripheral blood, and marked anisocytosis and poikilocytosis, with microcytes, elliptocytes, and teardrop-shaped cells develop. Neutrophils and platelets may be morphologically
abnormal, and their numbers may increase. The bone marrow shows increased reticulin, and progressive splenomegaly caused by extramedullary hemopoiesis may be found. During this "spent
phase," anemia and thrombocytopenia may develop.

Abnormal platelet function often leads to problems with hemostasis. Because surgical procedures may be hazardous, elective surgery should be postponed until the Hct is reduced to < 42% and platelets to < 600,000/µL.

Diagnosis

Polycythemia vera can be diagnosed when a patient has all three major criteria (i.e., increased red blood cell mass
[at least 36 mL per kg for men, at least 32 mL per kg for women]; normal arterial oxygen saturation [at least 92
percent]; and splenomegaly) or the first two major criteria plus any two of the minor criteria (i.e., platelet count of
more than 400 3 103 per µL [400 3 109 per L]; leukocyte count of more than 12 3 103 per µL [.01 3 109 per L];
alkaline phosphatase level of more than 100 U per L; a vitamin B12 level of more than 900 pg per mL [664 pmol per
L] or an unbound vitamin B12 binding capacity of more than 2,200 pg per mL [1,623 pmol per

L]).

PV must be considered in men with Hct > 54% and women with Hct > 49%. Because PV is a panmyelosis, its diagnosis is clear in patients with elevations of all three peripheral blood components, splenomegaly, and no evidence of secondary erythrocytosis. Diagnostic guidelines are listed in Table 130-2.

Because the Hct is a ratio of the number of circulating RBCs per unit volume of whole blood, an elevated Hct may be caused by decreased plasma volume. Thus, a diagnosis of true erythrocytosis is based on demonstrating an increased RBC mass. When measured with radioactive chromium (51Cr)-labeled RBCs, RBC mass > 36 mL/kg in men (normal, 28.3 ± 2.8 mL/kg) and > 32 mL/kg in women (normal, 25.4 ± 2.6 mL/kg) is considered abnormal. In relative (spurious) erythrocytosis (ie, stress polycythemia, Gaisböck's syndrome), the RBC mass is normal and the elevated Hct is caused by a decreased plasma volume. Once erythrocytosis has been established, its cause must be sought (see Table 130-3). Secondary erythrocytosis (see below) caused by lung disease, smokers' polycythemia caused by elevated carboxyhemoglobin levels, and tumors producing erythropoietic substances is more common. Table 130-4 lists laboratory tests for differential diagnosis, and Fig. 130-1 lists suggested steps in the evaluation of erythrocytosis.

If the arterial Hb O2 concentration is < 92%, tissue hypoxia may underlie the erythrocytosis. The leukocyte alkaline phosphatase (LAP) score is a histochemical stain for a neutrophil enzyme. The LAP score is elevated in 75% of patients with PV but is usually normal in patients with other causes of erythrocytosis. However, because fever, infection, or inflammation can elevate the LAP score, the LAP score is helpful in establishing a diagnosis of PV only in the absence of these stimuli. Urinalysis may detect microscopic hematuria, and renal ultrasonography or CT may reveal
a renal lesion causing secondary erythrocytosis. The P50 (the partial pressure of O2 at which Hb becomes 50% saturated) measures the affinity of Hb for O2 and excludes a high-affinity Hb (a familial abnormality) as the cause of erythrocytosis.

Patients with PV have low or undetectable serum erythropoietin levels; those with hypoxia-induced erythrocytosis have elevated levels; and those with tumor-associated erythrocytosis have normal or elevated levels. Bone marrow from patients with PV has the capacity to form endogenous erythroid colonies in culture, thus, the addition of erythropoietin is unnecessary. In contrast, in healthy patients or those with secondary erythrocytosis, the marrow requires added erythropoietin for erythroid colony formation.

Other laboratory abnormalities may occur in PV: Hyperuricemia and hyperuricosuria occur in >= 30% of patients, qualitative abnormalities in platelet function may be present, and vitamin B12 and
B12-binding capacity are frequently elevated.

Prognosis

Without treatment, 50% of symptomatic patients die within 18 mo of diagnosis. (For information about support for the patient and family, see Ch. 294.) With treatment, median survival is 7 to 15 yr. Thrombosis is the most common cause of death, followed by complications of myeloid metaplasia, hemorrhage, and development of leukemia.

The incidence of transformation into an acute leukemia is greater in patients treated with radioactive phosphate (32P) or alkylating agents than in those treated with phlebotomy alone. PV that transforms into acute leukemia is more resistant to induction chemotherapy than de novo leukemia.

Treatment

Because PV is the only form of erythrocytosis for which myelosuppressive therapy may be indicated, accurate diagnosis is critical. Therapy must be individualized according to age, sex, medical status, clinical manifestations, and hematologic findings.

Phlebotomy is integral to therapy and may be the only regimen needed. It is the treatment of choice for women of childbearing age and patients < 40 yr because it is not mutagenic and it eliminates symptoms of hypervolemia. Initially, 300 to 500 mL of blood should be removed every
other day until the Hct is < 45%. Phlebotomies should be performed more cautiously (ie, 200 to 300 mL twice/wk) in elderly patients and those with cardiac or cerebrovascular disease. Once the Hct is normal, the patient should be seen monthly and phlebotomized if the Hct is > 45%. Emergency surgery should be preceded by phlebotomy to reduce the RBC volume to normal. If necessary, intravascular volume can be maintained with crystalloid or colloid solutions.

Myelosuppressive therapy may be indicated for patients with platelet counts > 1 × 106/μL, with discomfort from visceral enlargement, with thrombosis, and with symptoms caused by hypermetabolism or uncontrolled pruritus and for elderly patients or those with cardiovascular disease who do not tolerate phlebotomy well.

Radioactive phosphate (32P) has a success rate of 80 to 90%. Remissions may last 6 mo to several years. It is well tolerated and requires fewer follow-up visits when the disease is controlled. However, 32P is associated with an increased incidence of acute leukemic transformation and thus requires careful patient selection (eg, best reserved for patients > 70 yr).

After a normal Hct (40 to 45%) is achieved with phlebotomy, 32P 2.7 mCi/m2 BSA is given IV (total dose <= 5 mCi). This dose usually normalizes the platelet count and Hct within 4 to 8 wk. 32P can be repeated and the dose increased if control has not been achieved. If there is no response after three injections during the first year of therapy, the patient should be managed with phlebotomy or hydroxyurea.

Alkylating agents are leukemogenic and should be avoided. However, hydroxyurea, which inhibits the enzyme ribonucleoside diphosphate reductase, has been used successfully in patients in
whom myelosuppressive therapy is indicated. Hydroxyurea has been used for this purpose for many years; its long-term safety regarding leukemogenesis continues to be studied. Patients are phlebotomized to a normal Hct (40 to 45%) and given hydroxyurea 10 to 15 mg/kg/day po. The patient is monitored with a weekly CBC. When a steady state is achieved, the interval between CBCs is lengthened to 2 wk and then 4 wk. If the WBC count falls to < 4000/µL or the platelet count to < 100,000/µL, hydroxyurea is withheld and reinstituted at 50% of the dose when the CBC normalizes. For poorly controlled patients who require frequent phlebotomies or who are thrombocythemic (platelet counts > 600,000/µL), the dosage can be increased by 5 mg/kg/day at monthly intervals with frequent monitoring until control is achieved. Acute toxicity is minimal; occasionally, patients develop a rash, GI symptoms, or fever.

Interferon- has been used for patients who cannot tolerate hydroxyurea or for whom the drug does not control the peripheral blood count. The typical starting dose of interferon- is 3.0 × 106 U sc 3 times/wk. Cost, acute toxicities, and long-term safety are factors in its use.

Hyperuricemia can be managed with allopurinol 300 mg/day po. Pruritus may be managed with antihistamines but is often difficult to control. After bathing, the skin should be dried gently. Cholestyramine 4 g po tid, cyproheptadine 4 to 16 mg po qid, and cimetidine 300 mg po qid have also been successful. Aspirin relieves symptoms of erythromelalgia (tender, inflamed toes).

Select the best treatment for a 70-year-old woman presents with iron deficiency anemia and is found to have adenocarcinoma of the cecum. She undergoes resection, and pathology reveals two pericolic lymph nodes with metastases. Exploration of the liver is negative for metastases.

a. Chemotherapy in combination with radiation postoperatively
b. Adjuvant chemotherapy
c. Radiation therapy
d. Surgical resection with postoperative adjuvant chemotherapy
e. Hospice

A

Rectal cancer patients with one to four positive lymph nodes derive most benefit from combined radiotherapy and chemotherapy; when more than four positive lymph nodes are found in the resected specimen, combined modalities are less effective. The effective regimen studied is fluorouracil (5-FU) with or without folinic acid.(MERK MANUAL)

A 70-year-old former shipyard worker, who smokes one pack of cigarettes daily, notes progressive weight loss and debility over a period of 6 months. Over a period of 1 month, he develops right chest pain and a nonproductive cough. A chest x-ray reveals extensive pleural thickening, pleural effusion, and hilar adenopathy. A pleural biopsy confirms mesothelioma. Which of the following is a favorable prognostic factor in this patient?

a. Male sex
b. Extent of disease at diagnosis
c. Good performance status
d. Pain as presenting symptom
e. Age over 65
f. None of the above

f is CORRECT.
All of the clinical components noted exhibit very poor prognostic factors in the patient with mesothelioma, a particularly aggressive disease that remains unresponsive to many forms of aggressive therapy.

A 29 year old pregnant lady ingested alcohol and illicit drugs(cocaine) which are harmful to fetus. What should a physician do?

the physician should be careful in reporting this case because the pregnant women may not come back for prenatal care which is important for both the mother and the fetus. So advice is important

Can a physician provide sterile needles for IV drug abusers?

yes, it reduces the risk of acquiring hiv or hepatitis.
for this the patient should be referred to appropriate health facilities

A 16 year old homosexual boy wanted to change his sexual orientation. He was not successful. He needed help. He requested the physician not to tell his parents.

What is the next step in management

1. do not tell his parents
   2.physician should help him avoid homosexual activities because patient has requested

A 16 y.o. boy was dx. with Osteosarcoma of the Right thigh. The surgeon recommended amputation. The boy refused amputation. He is doing very well otherwise. He is aware that death is certain without surgery.
What is the next step in management?

amputation should not be performed. competant adolescents(>15yrs) can give genuine conce

I read abt osteosarcoma....If lung involvement is not present than i will not agree with boys.....but if
prognosis is poor as you indicated....than i will consider boys wishes.....
osteosarcoma is curable cancer.....

Prognosis
From 70 percent to 90 percent of osteosarcomas in the limbs can be treated by limb-sparing surgery and chemotherapy - no amputation is needed. When osteosarcoma affects only one limb, the long-term survival is 60 percent to 75 percent; however, this percentage drops to 40 percent or less if cancer has also metastasized to the lungs.(National Cancer
Institute (NCI))

Diarrhea: Approach (Harrison)

The decision to evalute acute diarrhea depends on its severity and duration and on various host factors Most episodes of acute diarrhea are mild and self-limited, and they do not justify the cost and potential morbidity of diagnostic or pharmacologic interventions. Indications for evaluation

include profuse diarrhea with dehydration, grossly bloody stools, fever 38.5° C, duration >48 h without improvement, new community outbreaks, associated severe abdominal pain in patients older than 50 years of age, and elderly (70 years) or immunocompromised patients. In some patients with moderately severe febrile diarrhea with fecal leukocytes (or increased fecal levels of the leukocyte proteins lactoferrin or calprotectin) present or with dysentery, a diagnostic evaluation might be eschewed in favor of an empiric antibiotic trial.

The cornerstone of diagnosis in those suspected of severe acute infectious diarrhea is microbiologic analysis of the stool. Workup includes cultures for bacterial and viral pathogens, direct inspection for ova and parasites, and immunoassays for certain bacterial toxins (C. difficile), viral antigens (rotavirus), and protozoal antigens (Giardia, E. histolytica). The aforementioned clinical and epidemiologic associations may assist in focusing the evaluation. If a particular pathogen or set of possible pathogens is so implicated, then either the whole panel of routine studies may not be necessary or, in some instances, special cultures may be appropriate as for enterohemorrhagic and other types of E. coli, Vibrio species, and Yersinia. Molecular diagnosis of pathogens in stool can be made by identification of unique DNA sequences; and evolving microarray technologies could lead to a more rapid, sensitive, specific, and cost-effective diagnostic approach in the future.

Persistent diarrhea is commonly due to Giardia, but additional causative organisms that should be considered include C. difficile (especially if antibiotics had been administered), E. histolytica, Cryptosporidium, Campylobacter, and others. If stool studies are unrevealing, then flexible sigmoidoscopy with biopsies and upper endoscopy with duodenal aspirates and biopsies may be indicated.

Structural examination by sigmoidoscopy, colonoscopy, or abdominal CT scanning (or other imaging approaches) may be appropriate in patients with uncharacterized persistent diarrhea to exclude inflammatory bowel disease, or as an initial approach in patients with suspected noninfectious acute diarrhea such as might be caused by ischemic colitis, diverticulitis, or partial bowel obstruction

A 75-year-old white female comes to your office with symptoms suggestive of vertigo. You maneuver the patient from a sitting position to a lying position, with her shoulders and head slightly off the edge of the table. Upon rotating the head to one side, you observe horizontal nystagmus. Upon repetition of this maneuver, the nystagmus becomes less prominent.

Which one of the following is the most likely diagnosis?

a.Vestibular neuronitis
b.Acoustic neuroma
c.Viral labyrinthitis
d.Benign paroxysmal positional vertigo
e.Meniere's disease

D

This patient has a positive response to the Dix-Hallpike maneuver, which confirms the diagnosis of benign paroxysmal positional vertigo. The other conditions listed do not have a positional component.

A 48-year-old white female comes to see you because of abnormal vaginal bleeding. Her periods are lasting 3 to 5 days longer than usual, bleeding is heavier, and she has experienced some intermenstrual bleeding. Her physical examination is unremarkable, except for a parous cervix with dark blood at the os and in the vagina. She has no orthostatic hypotension, and her hemoglobin level is 11.5 g/dL. A pregnancy test is negative.

Which one of the following is the most important next step in management?

a.Laboratory tests to rule out thyroid dysfunction
b.An endometrial biopsy
c.Oral contraceptives, 4 times a day for 5 to 7 days
d.Cyclic combination therapy with conjugated estrogens (Premarin) and medroxyprogesterone acetate (Provera) each month
e.Administration of a gonadotropin-releasing hormone analog such as leuprolide acetate (Lupron)

B

A patient over the age of 40 who experiences abnormal vaginal bleeding must have an endometrial assessment to exclude endometrial hyperplasia or cancer. An endometrial biopsy is currently the preferred method of identifying endometrial disease. A laboratory evaluation for

thyroid dysfunction or hemorrhagic diathesis is appropriate if no cancer is present on endometrial biopsy and medical therapy fails to halt the bleeding. The other options listed can be used as medical therapy to control the bleeding once the histopathologic diagnosis has been obtained.

Which one of the following has proven most useful for breast cancer screening in women who have had silicone breast implants?

a.Thermography
b.Ultrasonography
c.Mammography
d.Magnetic resonance imaging

C

Screening by conventional film-screen mammography, supplemented by the displaced or Eklund view, is the recommended method for breast cancer screening in women with breast implants. The displaced view draws the breast forward while placing the implant posteriorly, increasing the amount of breast tissue visualized. None of the other modalities has proven useful for screening asymptomatic women for breast cancer.

A 68-year-old Asian male complains of a 2-hour history of pain in the right leg. He first noted paresthesia of the foot and lower leg, then increasingly severe pain which he describes as excruciating. He had a myocardial infarction (MI) 6 years ago. He is diabetic and tries, with moderate success, to control his blood sugar. He quit smoking when he had the MI.

On examination, his right leg is cool compared to the left. The distal leg is pale. The foot and toes are very weak and sensation is diminished. No pedal pulse can be palpated on either side.

What is the most likely diagnosis?

a.Diabetic neuropathy
b.Acute arterial embolism to the femoral artery
c.Ruptured abdominal aneurysm
d.Sciatica
e.Left hemisphere cerebrovascular accident

B

Acute lower extremity arterial occlusion is an urgent medical emergency which occurs more often in the elderly. Almost all patients with acute embolism have preexisting heart disease. The diagnosis must be suspected immediately from the clinical presentation, if the limb is to be saved. The predominant symptoms are paresthesia and severe pain, and signs include pallor, pulselessness, paralysis, and coolness. Diabetic neuropathy would not, by itself, be expected to

cause the sudden onset of symptoms. A ruptured abdominal aneurysm would cause some symptoms related to the back or abdomen. Sciatica is usually not associated with the sudden onset of a cool, pallid extremity. A cerebral vascular accident also does not lead to the combination of pain, pallor, and coolness. The absence of pulses in the other leg is easily explained by coexisting peripheral atherosclerosis caused by age and diabetes.

A 5-year-old white male is brought to your office for treatment 24 hours after being stung on the right hand by a bee. He has marked swelling of the right hand and forearm, redness, itching, and mild pain at the sting site. His mother says that the swelling began about 2 hours after the sting and is continuing to worsen. She is quite concerned and requests a referral to an allergist to have the child evaluated.

Which one of the following would be appropriate advice?

a.The child is unlikely to have anaphylaxis with subsequent stings, and he should be treated with antihistamines and antibiotics now
b.The child is unlikely to have anaphylaxis with subsequent stings, and he should be treated with antihistamines only now
c.The child's parents should carry an anaphylaxis emergency treatment kit with them at all times to treat future reactions
d.The child is at risk for anaphylaxis from subsequent insect stings, and immunotherapy may be

appropriate

e.This type of reaction is not likely to occur with subsequent insect stings

B

This patient is experiencing a large local reaction to an insect sting. Symptoms usually worsen for 48 hours and may last up to 7 days. People who have had large local reactions to stings tend to have similar reactions after subsequent stings. The risk of anaphylaxis is less than 5% per episode. Immunotherapy will not prevent large local reactions, thus venom skin tests serve no purpose. An anaphylaxis emergency kit (Ana-Kit) is designed to treat anaphylactic reactions and would not be appropriate for this patient. Antihistamines and aspirin, with or without short-term steroid therapy, constitute appropriate treatment. Cellulitis rarely develops after an insect sting, and antibiotics are not indicated in most cases.

63 year-old wm presents with six-day hx of unstable angina at night between 1 and 3 am. He has a 10-year history of mild type II diabetes, high cholesterol, an inferior wall AMI 20 years ago and a stroke 16 years ago that has left him with right hemiparesis, and moderate aphasia and a 100%

occlusion of his left carotid artery and 40-50% stenosis of his right carotid artery. Family hx is significant for heart disease in his father and severe diabetes in his mother.
At the time of admission seven days ago he had a BP 190/110 and a pulse 100. Cardiac enzymes were negative. Since his admission he has been symptom-free.
Prior to discharge a stress test revealed significant ST segment depression in V4-5. Cardiac echo shows mild concentric left ventricular hypertrophy, good systolic function and baseline hypomotility of inferior wall (unchanged). Medications include a nitroglycerin-patch, aspirin, a statin, a benzodiazepine, enalapril and a beta blocker.
What is your next step in management?
Is coronary angiography indicated?
Given his carotid status is CABG or PTCA absolute or relative contraindicated? Prognosis?
Thanks

Do not forget: he has 25% of his original carotid diameter left. With CABG they clamp the aorta, this may lead to significant hypoperfusion (especially in his right-left collaterals) in his left hemisphere causing ischemic rarefaction/strokes in the watershed areas. Not to mention the possibilty of dislodging plaques.
I feel Cabg is absolute/relative contraindicated. Maybe PTCA.

DM with multivessel CAD- CABG
ref- Ann Intern Med 128:216, 98
Please correct me if I am wrong.

This patient is at high risk candidate for CABG. He already has neurological deficits. His LCA is already 100% occluded. The question is whether he has developed collaterals on that side. If the patient has had 70%-99% occlusion on that side, I would have said do a L. CEA then CABG.

Your point of cross clamping of aeorta and further neurological compromise is well taken.I would consider PTCA only here

A 76 year old male patient is brought to the ED by his wife with complaints of neurological deficits. After a quick assessment, you suspect a stroke. Which of the following statements is true about thrombolysis with tPA?
a. a contrast CT would be appropriate prior to tPA administration.
b. a recent lumbar puncture is not a contraindication.
c. tPA may be given with heparin.
d. evidence suggests that tPA should be given within 3 hours for benefits to outweigh risks.

Answer is D.
Stroke is the third most common cause of death in the United States today and it is also a leading cause of long term disability. The National Institute of Neurological Disorders and Stroke (NINDS) trial in 1995 was the first large investigation to show that a thrombolytic agent, in this case, tissue plasminogen activator (tPA) could benefit victims of ischemic stroke.

The study showed that tPA therapy improved morbidity only if given to select patients within three hours of stroke onset. Beyond three hours, the risks of tPA significantly outweigh the benefits.

Contraindications to tPA therapy include: History or evidence of intracranial hemorrhage on non-contrast CT
(a contrast CT will not be helpful)
Active internal bleeding or bleeding diathesis
Major surgery or trauma within the previous two weeks (except head trauma)
GI bleed within the previous three weeks
Recent arterial puncture at a non-compressible site
Recent spinal tap
Glucose levels less than 50 or greater than 400
Seizure
Documented AVM or aneurysm
Improving symptoms
Systolic bp > 185mm Hg or diastolic bp > 110mm Hg.

Since the potential complications of tPA include intracerebral hemorrhage, close neurological monitoring of patients is vital and administration of anticoagulant or antiplatelet medications such as aspirin, warfarin, coumadin, or ticlid are not advised.

Urinary Incontinence

General. Defined as involuntary loss of urine.

Causes. Causes of transient incontinence include delirium, infection, atrophic vaginitis or urethritis, drugs, including sedatives, hypnotics, diuretics, opiates, calcium-channel blockers, anticholinergics (antidepressants, antihistamines), decongestants, and others. Less common causes include depression, excess urine production (diabetes, diabetes insipidus), restricted mobility (i.e., patient cannot get to the bathroom), and stool impaction.

Types of Incontinence and Their Specific Causes.

Urge incontinence. Involuntary loss of urine associated with a sudden urge and desire to void. Associated with detrusor overactivity. Causes include neurologic disorders (such as stroke, multiple sclerosis), urinary tract infections, and uroepithelial cancer.

Stress incontinence. Involuntary loss of urine during coughing, sneezing, laughing, or other increases in intra-abdominal pressure. Most commonly seen in women after middle age (especially with repeated pregnancies and vaginal deliveries), stress incontinence is often a result of weakness of the pelvic floor and poor support of the vesicourethral sphincteric unit. Another cause is intrinsic urethral sphincter weakness such as that from myelomeningocele, epispadias, prostatectomy, trauma, radiation, or sacral cord lesion.

Overflow incontinence. Involuntary loss of urine associated with overdistension of the bladder. May have frequent dribbling or present as urge or stress incontinence. May be attributable to underactive bladder, bladder outlet obstruction (such as tumor, prostatic hypertrophy), drugs (such as diuretics), fecal impaction, diabetic neuropathy, or vitamin B12 deficiency.

Functional incontinence. Immobility, cognitive deficits, paraplegia, or poor bladder compliance.

Evaluation. Confirm urinary incontinence and identify factors that might contribute:

History, including medications and provoking factors.
Physical, including abdominal exam, pelvic exam, rectal exam, sensation in the rectal and perineal area, edema, drugs.
Do stress testing. Have patient cough or sneeze.
UA and microscopic examination of urine. Urine culture, if warranted.
Check postvoid residual; will be increased by outlet obstruction, neurogenic bladder, etc.

Follow timing of incontinence. Observe patient urinating and watch for signs of straining, etc. Cystometry with flow rates, etc., may be needed if cause clinically inapparent.

Treatment. Set goals and scoring system ahead of time. Most patients will respond to behavioral techniques. Most require structured input from nursing personnel.

Bladder training. Need education, scheduled voiding, and rewards. Must inhibit urinating until a set time, and this set amount of time should be progressively increased. Start at 2 to 3 hours and progress upward. 12% may become entirely continent, and 75% may have a 50% reduction in incontinent episodes. Works best in urge incontinence but also may help stress incontinence.
Habit training. Teach patients to void when they normally would (e.g., morning, before bed, after meals).
Prompted voiding. Especially good in cognitively impaired individuals. Reduced incontinent episodes by about 50%.
Pelvic floor exercises (Kegel exercises). Especially useful in stress incontinence; 16% cure rate and 54% improve.
Intermittent catheterization may also be used.
Drugs.
For urge incontinence, bladder spasms, detrusor instability. Oxybutynin (Ditropan, Ditropan XL), tolterodine (Detrol) (low incidence of dry mouth). Tolterodine is expensive and no more efficacious than is oxybutynin. Second-line drugs include propantheline (may affect smooth muscle in the small bowel), flavoxate (Urispas), hyoscyamine sulfate (Levsin, Levsinex), and tricyclic antidepressants.
For stress incontinence. Agents that increase bladder outlet resistance (e.g., pseudoephedrine).
For men. Treating obstructive prostatic symptoms may help (see section on BPH).
In women. Estrogen may be useful for stress and urge incontinence (start with half applicator of estrogen cream every other day and increase to 1 applicator QHS if needed or used orally as for postmenopausal use). The efficacy of estrogen has been questioned by double-blind studies. May need surgical repair.
Newer products include Introl bladder neck support prosthesis (similar to pessary and assists

women with incontinence secondary to urethral hypermobility), Reliance urinary control insert, magnetic innervation technology.

A 55-year-old woman has had profuse watery diarrhea for 3 months. Laboratory studies of fecal water show the following:

Sodium: 39 mmol/L
Potassium: 96 mmol/L
Chloride: 15 mmol/L
Bicarbonate: 40 mmol/L
Osmolality: 270 mosmol/kg H_2O (serum osmolality: 280 mosmol/kg H_2O)

The most likely diagnosis is

A villous adenoma
B lactose intolerance
C laxative abuse
D pancreatic insufficiency
E nontropical sprue

The answer is A

In the case described, the osmolality of fecal water is approximately equal to serum osmolality. Furthermore, there is no osmotic "gap" in the fecal water; the osmolality of the fecal water can be accounted for by the stool electrolyte composition: $\{2 \times [(Na+) + (K+)]\} = [2 \times (39 + 96)] = 270$. A villous adenoma of the colon typically produces a secretory diarrhea. Lactose intolerance, nontropical sprue, and excessive use of milk of magnesia produce osmotic diarrheas with osmotic "gaps" caused by lactose, carbohydrates, and magnesium, respectively. Pancreatic insufficiency causes steatorrhea, not watery diarrhea.

Endocarditis Prophylaxis...

General Comments. Endocarditis can occur from transient bacteremia. Because a variety of health care procedures can result in bacteremia, prophylaxis against bacteria that can adhere to endocardium is recommended, particularly in patients at high risk for endocarditis. The frequency of bacteremia is highest subsequent to oral and dental procedures (because of the abundant oral flora), intermediate for genitourinary procedures, and lowest for diagnostic procedures of the gastrointestinal tract. It is important to give prophylactic antibiotics before a procedure because bacterial adhesion can occur within minutes after bacteremia develops.

Endocarditis Prophylaxis Recommended.

Cardiac conditions.

Prosthetic cardiac valves (including bioprosthetic, homograft, and mechanical).
Previous episode of bacterial endocarditis.
Most congenital cardiac defects (especially cyanotic congenital heart disease, patent ductus arteriosus, ventricular septal defects, and surgically repaired intracardiac defects with residual hemodynamic abnormalities).
Valvular heart disease resulting from rheumatic or other disease (aortic regurgitation and stenosis, mitral regurgitation and stenosis).
Hypertrophic cardiomyopathy.
Mitral valve prolapse with regurgitation.
Dental or surgical procedures.
Dental or surgical procedures that cause gingival or mucosal bleeding, including mechanical dental hygienic procedures.
Tonsillectomy or adenoidectomy.
Surgical procedures involving upper respiratory or gastrointestinal mucosa.
Rigid bronchoscopy.
Sclerotherapy of esophageal varices.
Esophageal dilatation.
Transesophageal echocardiography
Gallbladder surgery
Urethral catheterization or urinary tract surgery if infection present
Prostate surgery
I & D of infected tissue
Vaginal hysterectomy
Vaginal delivery in the presence of infection (chorioamnionitis, etc.)

Endocarditis Prophylaxis Not Recommended

Cardiac conditions.
Previous coronary artery bypass surgery.

Mitral valve prolapse without regurgitation. (If MPV is associated with thickening or redundancy of valve leaflets, may have increased risk of endocarditis, especially in men >45 years of age).
Functional or innocuous heart murmurs.
Cardiac pacemakers and implantable defibrillators.
Isolated secundum atrial septal defect.
6 months or more status postsurgical repair of PDA, VSD without residua.
Previous rheumatic heart disease or Kawasaki disease without valve dysfunction.
Dental or surgical procedures.
Dental procedures not likely to cause gingival bleeding such as fillings above the gum line, adjustment of orthodontic appliances.
Injection of intraoral anesthetics.
Shedding of primary teeth.
Tympanostomy tube insertion.
Endotracheal intubation, flexible bronchoscopy with or without biopsy specimens.
Cardiac catheterization.
Endoscopy with or without biopsy.
In absence of infection, urethral catheterization, D&C, uncomplicated vaginal delivery, abortion, sterilization procedures, insertion or removal of an IUD, or laparoscopy.

Standard Regimens

Dental, oral, upper respiratory tract. (Total children's dose should not exceed adult dose).
For adults. Amoxicillin 2 g (children, 50 mg/kg) PO 1 hour before procedure.
In penicillin-allergic patients. Clindamycin 600 mg (children, 20 mg/kg) PO OR Cephalexin or Cefadroxil 2.0 g (children, 50 mg/kg) PO OR Azithromycin or Clarithromycin 500 mg (children, 15 mg/kg) PO 1 hour before procedure
If unable to take oral medications. Ampicillin 2.0 g (children 20 mg/kg) IV or IM 30 minutes before procedure. Alternative: clindamycin 600 mg (children 20 mg/kg) IV 30 minutes before procedure.

In the high-risk, penicillin-allergic patient. Vancomycin 1.0 g IV over 1 hour, starting 1 hour before surgery. A repeat dose is not necessary.
GI or GU procedures. (Total children's dose should not exceed adult dose).
High risk. Ampicillin 2.0 g IV (children, 50 mg/kg) + Gentamicin 1.5 mg/kg IV (for adults and children, not to exceed 120 mg) 30 minutes before procedure, then amoxicillin 1.0 g (children, 25 mg/kg) PO 6 hours later, or ampicillin 1.0 g (children, 25 mg/kg) IV 6 hours after first dose.
High-risk, penicillin allergic. Vancomycin 1.0 g (children, 20 mg/kg) IV (over 1 hour) starting 1 hour before procedure + Gentamicin 1.5 mg/kg IV (both adults and children, not to exceed 120 mg) 1 hour before. Complete infusion 30 minutes before procedure.
Moderate or low-risk. Amoxicillin 2.0 g (children, 50 mg/kg) PO 1 hour before procedure. Or, Ampicillin 2.0 g (children 50 mg/kg) IM or IV 30 minutes before procedure.
Moderate or Low-risk, penicillin allergic. Vancomycin 1.0 g (children, 20 mg/kg) over 1 hour. Complete infusion 30 minutes before starting procedure.

A 73-year-old diabetic white female presents with a 1-cm ulceration on the medial edge of the foot near the first metatarsal head. There is surrounding erythema of the skin and some exudative drainage is noted.

Which one of the following statements is true regarding this problem?

a.Povidone-iodine (Betadine) ointment should be applied continuously to the wound

b.Surgical debridement is important to promote healing

c.Anaerobic bacteria and gram-negative rods are seldom isolated

d.A swab of the ulcer for culture is likely to identify the invading pathogen

B

Neuropathy, ischemia, and infection commonly contribute to diabetic foot ulceration. Common pathogens include Staphylococcus, Streptococcus, and as part of a mixed infection, anaerobic bacteria and gram-negative rods. Swabs of superficial drainage are unreliable for identifying the infecting organism. A curettage specimen is more sensitive and specific. Thorough sharp debridement to remove debris, fibrin, and necrotic tissue is important to promote healing. Topical antibiotic ointments such as povidone-iodine promote maceration and are cytotoxic; therefore, they are not recommended.

A 67-year-old white female comes to your office complaining of a 1-month history of fatigue, weight loss, low-grade temperature elevation, and aching and stiffness in the upper back and shoulders. Physical examination confirms weakness in both shoulders with an otherwise normal musculoskeletal examination. Her temperature is 37.7° C (99.9° F).

Which one of the following would be the most appropriate diagnostic study?

a.Radiographs of the spine and shoulders

b.Erythrocyte sedimentation rate

c.Serologic titers for cytomegalovirus

d.Electromyographic studies of the shoulder girdle muscles

e.Febrile agglutinins

B

The symptoms described in this case are most consistent with a diagnosis of polymyalgia rheumatica, a subacute rheumatologic disorder affecting primarily the elderly. The erythrocyte sedimentation rate is the best diagnostic study and in most cases confirms the diagnosis. The disease does not cause radiographic changes. Cytomegalovirus infection would not be part of this differential. Electromyography would be unlikely to show changes in the absence of muscle weakness, and febrile agglutinins exhibit no relationship to this disease.

A 75-year-old white male with dementia of the Alzheimer's type presents with syncope. He often feels faint upon rising from his chair and occasionally passes out. His medication consists of thioridazine (Mellaril), 25 mg daily for agitation. The only pertinent abnormality found on

examination is a 20-mm Hg fall in systolic blood pressure after standing for 1 minute.

Appropriate initial management would be to

a.prescribe fludrocortisone (Florinef), 0.1 mg daily
b.discontinue the thioridazine
c.instruct the patient to arise slowly from his bed or chair
d.encourage the patient to wear elastic stockings

B

This patient has orthostatic hypotension. Orthostatic hypotension is a symptomatic 20-mm Hg drop in systolic blood pressure or 10-mm Hg drop in diastolic blood pressure on assuming an upright posture. Initial therapy should include discontinuation of any drug that may be responsible for the orthostatic hypotension. In this patient the cause of the orthostatic hypotension is the thioridazine. Discontinuation of the drug is the only treatment he needs at this time. In the event the patient fails to improve with discontinuation of the offending drug, then he should be instructed to arise slowly from his bed or chair and encouraged to wear elastic stockings; if necessary, he can be started on fludrocortisone, 0.1 mg daily.

What is the single most important prognostic factor for survival in patients with vulvar squamous cell carcinomas?

A.tumor size

B.depth of invasion

C.tumor grade

D.Inguinal lymph node status

D

Inguinal lymph node status is the single most important prognostic factor in patients with squamous cell carcinomas. A study of 588 patients treated in two Gynecologic Oncology Group (GOG) trials reported a 5-year survival of 91% in those with negative inguinal lymph nodes. Five-year survival decreased to 75%, 36%, 24%, and 0% in patients with one or two, three or four, five or six, or seven or more positive lymph nodes, respectively. Patients with bilateral lymph node involvement had a survival rate of 25%, compared to 71% for those with unilateral lymph node involvement.

Other major prognostic factors include tumor size, depth of invasion, tumor grade, the presence of lymph-vascular space invasion, and extracapsular growth of lymph node metastases in the groin. These features correlate with one another, and are predictive of lymph node metastasis.

Source: The Diagnosis and Management of Vulvar Cancer.

Which of the following risk factors found in pregnant women with chronic hypertension is associated with adverse neonatal outcomes independent of the development of preeclampsia:

A.smoking history
B.proteinuria
C.advanced maternal age
D.black race

B

Proteinuria, detected early in pregnancy, is an independent risk factor for adverse neonatal outcomes, independent of the development of preeclampsia in women with chronic hypertension. Preeclampsia was defined as proteinuria (urinary protein excretion of greater than or equal to 300mg per 24 hours) in women without proteinuria at baseline.
Source: Sibai BM, Lindheimer M, Hauth J, et al: Risk Factors for Preeclampsia, Abruptio placentae, and Adverse Neonatal Outcomes Among Women with Chronic Hypertension.

What is the standard treatment for HIV-infected pregnant women?

A.There is no standard treatment for HIV-infected pregnant women

B.combination therapy with zidovudine and lamivudine

C.Zidovudine monotherapy

D.Nevirapine

E.Zalcitabine with Didanosine

A

There is no standard treatment for HIV-infected pregnant women. Many decisions about HIV therapy will be predicated on the stage of HIV disease in the mother. HIV-infected pregnant women should be offered a range of antiretroviral therapy options with discussion of the risks, both known and unknown, of exposing the baby in utero to the medications, particularly in the first trimester, balanced against the benefits of therapy to control HIV infection and improve immunologic status. If possible, pregnant women infected with HIV should be enrolled in clinical trials to ensure that all aspects of therapy and toxicities are carefully documented. Drug exposure should be reported to national pregnancy registries.

Source: Shah SS, McGowan JP.: Preventing HIV Transmission During Pregnancy. Infect Med. 2001;18:94-105.

References

1.US Public Health Service Perinatal HIV Guidelines Working Group. US Public Health Service Task Force recommendations for the use of antiretroviral drugs in pregnant women infected with HIV-1 for maternal health and for reducing perinatal HIV-1 transmission in the United States, 2000. Available at: http://hivatis.org/guidelines/perinatal/PerinatalFeb2500.pdf. Accessed August 6, 2001.

All the following statements regarding the treatment of patients with HIV infection are true EXCEPT

A use of zidovudine (ZDV) therapy during pregnancy reduces the risk of vertical transmission to less than 10 percent
B HIV RNA assays should not be relied upon in making decisions about changing a patient's antiviral regimen
C though a useful agent in antiviral therapy, zidovudine monotherapy is a suboptimal regimen
D primary prophylaxis of Mycobacterium avium complex has clearly demonstrated efficacy in preventing bacteremia and improving survival
E breast feeding is a potential mode of HIV transmission and should be discouraged in women who are HIV-infected

The answer is B
AIDS Clinical Trial Group 076 demonstrated that ZDV (AZT) administration to women reduced the rate of HIV transmission in neonates from 25 percent in the placebo group to 8 percent in ZDV recipients. Postnatal transmission of HIV from mother to infant via breast feeding has been

clearly documented. A meta-analysis of several prospective trials indicated a risk of 7 to 22 percent. Certainly, in developed countries, breast feeding by an infected mother should be avoided. There is, however, disagreement regarding this recommendation in developing countries where breast milk is the only source of adequate nutrition for the infant. Plasma HIV RNA assays provide precise and compelling data on the relative magnitude and durability of antiretroviral therapy. Most authorities recommend the use of HIV RNA assays (viral load) and CD4+ counts to guide decisions regarding antiretroviral therapy. While zidovudine has proven benefit in patients with <500 CD4+ lymphocytes, its use as monotherapy is suboptimal and should be reevaluated in any patient receiving it. Rifabutin and macrolides have both demonstrated marked efficacy in the primary prophylaxis against Mycobacterium avium with a concomitant decrease in bacteremia and improvement in survival

Which drug is usually effective for treating lithium-induced tremor?

a. Benztropine
b. Triazolam
c. Propranolol
d. Verapamil
e. Valproic acid

The correct answer is c.

c. Lithium-induced postural tremor is probably the most common of the medication-induced postural tremors. Propranolol in the range of 20 to 160 mg daily, given in two or three divided doses, is generally effective for treating lithium-induced postural tremor.

The most commonly recommended screening interval for cholesterol for adults under age 65 with no history of cardiac disease is

a. Yearly
b. Every 3 years
c. Every 5 years
d. Every 7 years
e. Every 10 years

C

In adults under age 65 with no cardiovascular disease, it is recommended that a serum cholesterol be done every 5 years. If the level is greater than 200 mg/dL, a complete fasting lipid profile should be ordered

In pt with >2 risk factors and total Ch>200, or <2 RF, total Ch>239, you do fsting lipoprotien analysis. If pt has <2 RF and is 200-239, recheck in 1-2 years.
Hope this help. In pt with >2 risk factors and total Ch>200, or <2 RF, total Ch>239, you do fsting lipoprotien analysis. If pt has <2 RF and is 200-239, recheck in 1-2 years.
Hope this help.

The number of community elderly people over age 65 who experience a fall is

a. 33%
b. 55%
c. 90%

The correct answer is a.

a. About one-third of community elderly people older than 65 years of age fall each year; this percentage increases to 50% by age 80 years. Most fallers experience multiple episodes. Although the results have been inconsistent, most studies have shown that the frequency of falling is similar in older men and women. Women, however, are about twice as likely to suffer a serious injury during a fall

What is the appropriate indication for influenza vaccine?

a. Adults over age 65 or those with chronic cardiac or pulmonary disease
b. All adults if not previously immunized within the past 10 years
c. Adults with sickle cell disease or splenic dysfunction
d. Staff and patients in dialysis unit

A

a. Influenza vaccine is recommended for people over age 65 who have chronic cardiac or pulmonary disease as well as for younger patients with asthma

Which of the following conditions is not associated with smoking?

a. Peripheral vascular disease
b. Parkinson's disease
c. Complications of pregnancy
d. Cancer of the larynx
e. All of the above

The correct answer is b.
b. Peripheral vascular disease, complications of pregnancy, and cancer of the larynx are all associated with smoking. Other diseases related to smoking include coronary artery disease, cerebrovascular disease, lung, esophageal, oral, and bladder cancers, and chronic obstructive pulmonary disease. Parkinson's disease is not associated with smoking but may be inversely related to it

Which condition is predictive of cardiovascular events?

a. Hospitalization
b. Systolic hypertension
c. Diastolic hypertension

d. Antihypertensive medications

e. Normal-pressure hydrocephalus

B

Although the clinical treatment of hypertension has classically focused more on diastolic blood pressure levels, epidemiologic data indicates that for middle age and elderly adults, systolic blood pressure is more predictive of future cardiovascular disease than diastolic blood pressure. Elevation of systolic blood pressure continues to be the single strongest cardiovascular risk factor, but elevation of diastolic blood pressure is diminished substantially in terms of associated risk.

Systolic BP is a sensitive indicator of CVA/Adverse cardiovascular events, more than diastolic(particularly in gero population). However hospitalization is also an independent risk factor.

A 24-year-old, previously healthy woman presents with jaundice, confusion, and fever. Initial physical examination is unremarkable except for scattered petechiae on the lower extremities, scleral icterus, and disorientation on mental status examination. Laboratory examination discloses the following: hematocrit, 27 percent; white cell count, 12,000/L; platelet count,

10,000/L; bilirubin, 85 mol/L (5 mg/dL); direct bilirubin, 10 mol/L (0.6 mg/dL); urea nitrogen, 21 mmol/L (60 mg/dL); creatinine, 400 mol/L (4.5 mg/dL). Red blood cell smear discloses fragmented red blood cells and nucleated red blood cells. Prothrombin, thrombin, and partial thromboplastin times are all normal.
The most effective and appropriate therapeutic maneuver is likely to be

A plasmapheresis
B administration of aspirin
C administration of high-dose glucocorticoids
D administration of high-dose glucocorticoids plus cyclophosphamide
E splenectomy

A

she shows the pentad of TTP(thrombocytopenia, fever ,confusion, MAHA, renal dysfunction)

plasmapheresis is the mainstay of therapy.at least 5days or for 2days after normalization of platelet count, resolution of neurologic signs
we can add methylprednisone 200mg IV qd.
antiplatelet agent (aspirin 325mg qd) in some cases
splenectomy- recurrent , refractory to plasma exchange

Which of the following statements best describes the role of polymerase chain reaction (PCR) in the diagnosis of HIV infection?

A It should be used if the western blot is indeterminate
B It is a useful screening test
C It should be used if two consecutive serologic tests (ELISA) are positive
D It should be used if the initial serologic test is positive, but the second is negative
E It has no real role

The answer is A
The standard serologic test for HIV infection, the enzyme-linked immunosorbent assay (ELISA), has a sensitivity of over 99.5 percent. However, this test is not particularly specific in that low-risk patients are subject to a false-positive rate of over 10 percent. If the ELISA test is indeterminate or positive, the test should be repeated. If the repeat is positive or indeterminate, one should proceed to the next step, which is a western blot test. If the repeat ELISA is negative, then the person can be assumed not to have HIV infection. A western blot test involves the reaction of the serum with a strip impregnated with HIV-1 antigens. Binding of antibodies in the patient's serum to the antigens on the strip is detected with an enzyme-conjugated anti-human antibody. A positive western blot test requires the detection of antibodies to several HIV-1 gene products. If the western blot is indeterminate, perhaps due to infection in evolution or due to cross-reacting antibodies in the patient's serum, one should proceed to a PCR test and repeat the western blot in 1 month. If the PCR is negative and there is no progression on the western blot, the diagnosis of HIV infection is ruled out. The PCR

test is extraordinarily sensitive, but the false-positive rate would be too high for use as a cost-efficient screening test. A DNA PCR test for HIV involves the isolation of DNA from blood mononuclear cells and incubation with primers from both the gag and LTR regions, followed by amplification and hybridization to detect HIV proviral DNA. An RNA PCR test can be used to monitor the level of HIV genome present in plasma.

DNA PCR estimates viral load and is an indicator of HAART response-should be zero within 4-6 months of therapy. Ultrasensitive tests are also there but only the PCR is FDA approved for F/U

All of the following statements regarding the epidemiology of HIV infection are correct EXCEPT

A the risk of transmission following skin puncture from a needle contaminated with blood from an HIV-infected patient is less than 0.5 percent

B most cases of AIDS are now among IV drug users

C the risk of transmission from a single donor unit of blood is approximately 1/500,000

D most pediatric cases of AIDS arise because of vertical transmission from an infected mother

E there is no convincing evidence that saliva can transmit HIV

The answer is B

Among U.S. cases of AIDS, male-to-male sexual contact represents the most frequently reported mode of HIV transmission among persons with AIDS. However, over the past few years, the number of newly reported cases of AIDS among other groups, including IV drug users and heterosexuals, from certain large cities have surpassed the number of newly reported cases among men who had sex with men. The proportion of new cases attributed to IV drug use and heterosexual sex has increased dramatically over the past ten years. There is a small but existent occupational risk of HIV transmission. Large, multi-institutional studies have indicated the risk of a penetrating injury, such as a needlestick from an HIV-infected person, to be approximately 0.3 percent. Risk posed by a mucocutaneous exposure is probably closer to 0.1 percent. Current measures used to screen donors now include p24 antigen testing which has resulted in a further decrease in the risk of being infected from a unit of blood to at most 1 in 450,000 to 1 in 660,000. Pediatric AIDS arises mainly from infants born to mothers who are HIV-infected. The remainder are generally exposed via blood transfusions. Although HIV can be rarely isolated from saliva, there is no convincing evidence that saliva can transmit HIV infection, either through kissing or other exposures, such as occupationally to health care workers.

NAT (genomic amplification testing) is also used by big centers, I think it is not yet FDA approved. It shortens the window period by 11 days.

Ref J.B. Henry: Clinical Diagnosis and Management by Laboratory Methods, 20th edition

Which is a risk factor for oral cancer?

a. Radiation to head and neck
b. Alcohol and tobacco abuse
c. Fair skin and sun exposure

B

most important predisposing risk factors for the primary head and neck ca. is the use of alcohol and tobacco,
the use of the two together is more than additive in enhancing carcinogenesis
other associated etiologic agents include viruses.(HPV 6,11,16,18), EBV, HIV genetic susceptibility...

Which legal document most correctly defines an advanced directive?

a. Living will

b. Durable power of attorney for health care

c. Both

d. Neither

C

Advance directives are written documents intended to become effective when the patient has lost decision-making capacity. There are three forms of advance directives. The living will specifies medical treatment preference and the medical conditions in which those preferences should or should not be implemented. With the durable power of attorney a person is designated to act as a health care representative with the legal authority to make health care decisions for the patient. However, the decisions are not specified by the document. The third form of advance directive is a combination of the above two forms. A representative is designated with the responsibility to assure that the patient's written instructions concerning medical therapy are respected

A 44-year-old nonsmoking woman presents to your office with a productive cough. She has had asthma since childhood, with several exacerbations requiring hospitalization over the past 10 years. She comes to you for treatment of poorly controlled asthma. She complains of daily productive cough, frequently expectorating brown mucus plugs, and with dyspnea, wheezing, fever, and chills. She currently is on an albuterol inhaler, inhaled beclomethasone, theophylline, and occasional short courses of prednisone for exacerbations. She denies allergies, pets, or travel. She denies postnasal drip, heartburn, and chest pain.

Physical examination reveals a woman in no respiratory distress. Head and neck examination is normal. Lung examination reveals diffuse inspiratory and expiratory wheezing with crackles in the right upper lung field. A chest radiograph reveals a right-upper-lobe infiltrate with subsegmental atelectasis and central bronchiectasis. A room air ABG shows pH 7.45, pCO2 35 mmHg, and pO2 80 mmHg. Hematocrit is 40%, leukocyte count is 15,000 mm3, segmented neutrophils 60%, lymphocytes 20%, and eosinophils 15%. Serum IgE level is 3500. Sputum analysis reveals hyphae consistent with aspergillus. A skin test for aspergillus reveals an immediate wheal and flare response.

The most likely diagnosis of this patient is allergic bronchopulmonary aspergillosis.

Which of the following is the most appropriate therapy for this patient?

a. Itraconazole
b. Amphotericin B
c. Prednisone
d. Surgical resection
e. No specific therapy is required

C

ABPA- allergen avoidance and intermittent use of corticosteroids
Pulmonary aspergilloma-observation and surgical resection for the patients with massive hemoptysis
Invasive aspergilloma- serious invasion:amphotericin B(1mg/kg/day for 2.0-2.5g total)
mild to moderate invasion-Itraconazole(600mg po qd for 4days, then 200-400mg po qd for 1 year)

Which of the following patients should undergo operative excision of an abdominal aortic aneurysm and replacement with a vascular graft?

A: A 58-year-old man with a 8-cm abdominal aneurysm who sustained a myocardial infarction 3 months ago

B: A 65-year-old man with a 7-cm aneurysm who sustained a myocardial infarction 1 year ago

C: A 65- year- old woman with a 4-cm aneurysm and no prior history of heart or lung disease

D: A 58-year-old man with a 7-cm aneurysm and FEV1 of 0.8 L

E: A 67- year- old man with an 8-cm aneurysm and creatinine 3.2 mg/dL

The answer is B

The vast majority of aortic aneurysms are due to atherosclerosis; 75 percent of such aneurysms are located in the distal aorta below the renal arteries. Although these aneurysms are typically asymptomatic, rupture may occur with devastating consequences. The prognosis is related to the size of the aneurysm as well as the presence of coexistent vascular diseases. Patients with aneurysms exceeding 6 cm who are not treated surgically have 50 percent mortality in 1 year, while those with lesions between 4 and 6 cm have 25 percent mortality during the first year. Surgical excision and replacement with a prosthetic graft are indicated for patients with aneurysms greater than 6 cm in diameter as well as in symptomatic patients or those with rapidly enlarging aneurysms regardless of the absolute diameter. Depending on the degree of operative risk, surgery also may be recommended in those with aneurysms with diameters between 5 and 6 cm. Contraindications to elective reconstruction include myocardial infarction within the past 6 months, intractable congestive heart failure, ongoing severe angina pectoris, severe obstructive lung disease, severe chronic renal failure, history of stroke with residual neurologic deficits, and life expectancy less than 2 years. An extensive preoperative evaluation including assessment of coronary disease, renal failure, and pulmonary function studies should be carried out, and if abnormalities are found, they should be ameliorated when possible. For patients in whom the diameter of the aneurysm is less than 6 cm or in whom there is significant operative risk, serial ultrasound may be helpful in defining a group that more urgently requires surgical intervention based on expansion of 0.5 cm or more.

Is a stool ova and parasites (stool O&P) recommended in cases of acute diarrhea?

A. Yes
B. No

B

Because this laboratory evaluation isn't cost-effective in cases of acute diarrhea, it is not recommended. However, the American College of Gastroenterology Practice Parameters Guideline Committee (ACG PPGC) recommends ordering the study if there is a high suspicion of parasitic infection; if the patient hasn't been treated empirically for parasites; or if one of the following conditions exists:

• persistent diarrhea in a patient with AIDS or who is a homosexual male;
• diarrhea following travel to Russia, Nepal, or mountainous regions;
• exposure to infants attending daycare centers;
• persistent diarrhea associated with a community outbreak; or
• bloody diarrhea with negative fecal leukocyte test results.

at first,ask about fever, tenesmus, abdominal pain hx.of diet, travel ,antibiotics use ,sexual exposure ,other disease
if say "no" - rehydration with oral or IV and observe
if say "yes" -stool exam and culture..

A 77-year-old male with COPD has a non-Q wave MI. Should this patient receive a beta-blocker?

A. Yes
B. No

Yes. According to a retrospective review of 201,752 patients with myocardial infarction published in the August 20, 1998 issue of the New England Journal of Medicine, mortality was lower across every subgroup of patients treated with beta-blockade compared with untreated patients, including those with heart failure, chronic pulmonary disease, advanced age, and non-Q wave infarction.

A 25-year-old woman presents with brownish discoloration of the face. She is 6 months pregnant and reports that the areas of hyperpigmentation developed as her pregnancy progressed. What is the most likely diagnosis?

A. Solar Lentigines
B. Pityriasis versicolor
C. Café au lait Spots
D. Melanoma
E. Melasma

E

Melasma gravidarum (chloasma gravidarum). This form of melasma (chloasma), a fairly trivial cause of skin hyperpigmentation, generally presents in pregnant women as a tan or brownish discoloration on the face. These blotches often proceed as far up as the hairline and extend down to the jawline. The hyperpigmented areas of skin are typically symmetric and localized to the forehead and chin, but may also manifest on the areolae, axilae, and genitals. The condition is more prevalent among dark-skinned individuals and worsens on sun exposure. Levels of progesterone and estrogen -- both of which stimulate melanin formation --

rise during pregnancy, implicating a role for these hormones in the etiology of this pigmented lesion. Although melasma gravidarum usually fades after delivery, it may persist for many years.

A diabetic patient well-known to you has a BP reading of 150/90mmHg at his latest office visit. What is the target BP recommended for patients with diabetes?

A. 130/80 mmHG
B. 120/80 mmHG
C. 120/90 mmHG
D. 130/90 mmHG

A

According to the guidelines for management of hypertension (JNC-VI) which were revised in November of 1997, patients with diabetes should have a BP less than 130/80mmHG.
Other revisions include an emphasis on classification; the previous terms of "mild," "moderate," and "severe" hypertension have been replaced with "Stages 1, 2, and 3." Because of its small size, Stage 4 hypertension (from JNC V) has been deleted, with Stage 3 now encompassing patients with BP readings greater than 180mmHg systolic and/or greater than 110mmHg diastolic. Prognostic implications of systolic hypertension are more important than those of diastolic hypertension.

Is testing for H pylori recommended in patients with no prior history of ulcer disease and who are not at increased risk of NSAID-induced ulcer complications?

A. Yes
B. No

B

In a patient with no history of ulcer disease and who otherwise is not at increased risk of NSAID-induced ulcer complications, testing for H pylori is not recommended at this time.

Immunocompromised children should be vaccinated against varicella?

A. yes
B. no

No. The American Academy of Pediatrics currently recommends that most of these children not receive the vaccine routinely. The results of administering the vaccine under research protocols show that around 40% of those with acute lymphocytic leukemia (ALL) developed a small rash consisting of vesicular lesions that often congregated around the site of injection.[1] Many of these patients needed treatment with acyclovir, and some required admission to the hospital for IV administration.
There is, however, an ongoing study in which children with ALL are receiving the vaccine. The manufacturer makes free vaccine available -- through a research protocol -- to any physician for use in patients who have ALL and who meet certain eligibility criteria.[2] This is also true for renal transplantation patients. The CDC now recommends giving the vaccine to children with HIV who are asymptomatic and have CD4+ age-specific T-lymphocyte percentage of >/= 25%.[3] However, a 2-dose regimen is recommended.

contraIx.of VZV vaccination severe immunocompromised patient , patient receiving gammaimmunoglobulin, during pregnancy, acute febrile illness , hypersensitivity to certain antibiotics(erythromycin..), poor general condition due to renovascular disease, renal disease, and liver disease

high risk group like immunocompromised with chickenpox-
acyclovir 500mg/m2/8hours)

What is the most common pattern of dyslipidemia in patients with type 2 diabetes?

A. elevated triglyceride levels and decreased HDL cholesterol
B. elevated triglyceride levels
C. elevated triglyceride levels and increased high-density lipoprotein (HDL) cholesterol
D. elevated triglyceride levels and increased HDL cholesterol levels
E. elevated triglyceride levels and increased LDL cholesterol levels

A

Dyslipidemia in patients with type 2 diabetes is most commonly manifested by elevated triglyceride levels and decreased high-density lipoprotein (HDL) cholesterol. Although the concentration of low-density lipoprotein (LDL) cholesterol is usually not significantly different from that of nondiabetic individuals, patients with type 2 diabetes typically have a higher prevalence of small denser LDL particles, which have been reported to be more atherogenic.
The American Diabetes Association defines optimal lipoprotein levels for adults with diabetes as LDL cholesterol < 100 mg/dL (2.60 mmol/L) and an HDL cholesterol > 45 mg/dL (1.15 mmol/L). The desirable level of triglycerides is < 200 mg/dL (2.30 mmol/L).

What is the definitive therapy for decompression illness in divers?

A. Hyperbaric oxygen (HBO) treatment
B. Nitrogen treatment
C. 100% oxygen at 30 FSW for 90 minutes bid
D. No definite treatment is available

A

Hyperbaric oxygen (HBO) treatment is gaining popularity as the definitive therapy for a growing number of disorders, including decompression illness, arterial gas embolism, carbon monoxide poisoning, clostridial infections, crush injuries, diabetic leg ulcers, skin graft failures, refractory osteomyelitis, thermal burns, necrotizing soft tissue infections, and osteoradionecrosis.
In the US, hyperbaric oxygen therapy for decompression sickness is guided by the Navy Treatment Tables. The prescribed treatments are very effective, especially when recompression is begun promptly. The purpose of the therapy is two-fold: to promote inert gas elimination and to help cause a decrease in bubble size. The treatment outlined by the tables also provides oxygen to the damaged tissues, treats platelet and clotting damage and allows excretion of harmful metabolites. The oxygen reduces CNS edema and provides a high oxygen gradient (2000 mm Hg) for the ischemic tissues.

Should patients with total hip arthroplasty (THA) receive antibiotic prophylaxis for dental procedures?

A. Yes
B. No

B

Perioperative antibiotics are not necessary in routine dental procedures in nonimmunocompromised patients who have total hip implants. However, they should be used in any post-THA patients undergoing extensive dental procedures involving periodontal work, extractions, and relatively high blood loss.
In a retrospective study of 3000 patients with THA over 14 years from 1982 to 1995, 52 (1.7%) late infections of THA were identified. Of those, 3 patients (6% of those infected) were found to have infections related to a dental procedure both temporally and bacteriologically.

A 55-year-old healthy white postmenopausal female presents to your office with complaints of low back pain. She takes no drugs and does not smoke. Would you recommend that she get a bone density scan?

A. Yes
B. No

Yes. Because of her gender, advancing age (she is postmenopausal and not taking estrogen), and complaints of back pain (which may be due to weakened vertebrae), this patient should be evaluated for osteoporosis. Diagnosis of osteoporosis is based on measurement of bone mineral density, which correlates with fracture risk.
The absence of risk factors, such as family history or the use of certain medications, including anticonvulsants or corticosteroids, which can promote osteoporosis, does not guarantee that this patient does not have the disease; up to 35% of all women with no documented risk factors will develop osteoporosis. And osteopenia may be present in more than half the postmenopausal women seen in a typical primary care setting. Therefore, bone mineral density testing should be considered in any patient with at least one risk factor for osteoporosis, a history of hyperthyroidism/hyperparathyroidism, a chronic disease that can cause bone loss, and in all postmenopausal women who are not taking estrogen replacement therapy. Dual energy x-ray absorptiometry is the most widely used imaging technique for measuring bone mineral density.

A 65-year-old cirrhotic male with a history of hepatitis C virus (HCV) infection presents to clinic. What is the recommended screening strategy for assessing this patient for hepatocellular carcinoma (HCC)?

A. ultrasound every six months
B. alpha-feto protein (AFP) every six months
C. ultrasound and alpha-feto protein (AFP) every three months
D. ultrasound and alpha-fetp protein (AFP) every six months.
E. No screening is recommended

Answer is C.
According to a report from the American College of Gastroenterology Annual Scientific Meeting (held October 15-20, 1999, in Phoenix, Ariz), for patients at "extremely high risk" of developing HCC, such as those with cirrhosis associated with active ethanol ingestion and HCV infection, ultrasonography and serum alpha-fetoprotein (AFP) measurements should be performed every 3 months.
HCC is the most common primary liver cancer and has a worldwide distribution. This malignancy is associated with many underlying conditions and events, including hepatitis B virus (HBV) and HCV infection (with or without cirrhosis); end-stage liver diseases due to ethanol ingestion, hemochromatosis, and alpha-1-antitrypsin deficiency; exposure to environmental toxins, such as aflatoxin; and administered medications, such as anabolic

steroids.

Establishing a proper screening strategy first requires determination of who should be screened. All patients with at-risk disorders should be considered for screening. In most cases, this means screening those with cirrhosis, especially when HBV, HCV, ethanol, or alpha-1-antitrypsin deficiency are causative diseases.

Poisoning

Millions of poisoning exposures occur each year in the United States, resulting in nearly 900,000 visits to emergency departments. About 90% of poisonings happen in the home, and more than half of them involve children under age six. Many poisonings can be prevented if safety precautions are taken around the home. If a poisoning occurs, calling a poison control center can help ensure rapid, appropriate treatment.

History

The history obtained from a poisoned patient is often inaccurate or incomplete, but the following information should still be sought from any source available.

(a) Name of substance ingested.

(b) Time of exposure or ingestion.

(c) Amount ingested - this usually ends up as an estimate. It is best to have both a "maximum possible ingestion" based on the premise that the bottle, prescription, or container was completely full, as well as a "probable amount ingested" based on available information. When in doubt, base your actions on the maximum possible ingestion.

(d) A calculation of the mg dosage ingested.

(e) Interventions (i.e., Ipecac, etc.) before to presentation.

(f) Past history of poisoning, overdose, or psychiatric history.

Physical Exam

(a) Complete vital signs noting any trends.

(b) Mental status.

(c) Focused exam: pulmonary, cardiovascular, abdomen, neurological systems as well as evidence of trauma and abdominal exam, (useful in identifying toxidromes).

Diagnostic Studies

Request an electrocardiogram (ECG) for patients with an abnormal or irregular pulse or who have ingested a cardiotoxic drug. A flat plate and upright abdominal x-ray (KUB) may be helpful in identifying radiopaque substances such as heavy metals or enteric coated tablets.

Laboratory Studies

(a) Electrolytes, glucose, BUN/creatinine.

(b) Arterial blood gas (ABG).

(c) Aspirin, acetaminophen, ETOH levels.

(d) CBC.

(e) Qualitative urine or serum drug screens seldom alter treatment or immediate disposition, but may be useful for later documentation of psychiatric evaluation.

(f) Qualitative levels of specific drug toxins are useful in the following limited number of agents: acetaminophen, aspirin, ethanol, methanol, ethylene glycol, iron, digoxin, theophylline, lithium, and anticonvulsants.

Principles of treatment

Five principles of treatment should be considered in the management of every poisoned patient. They may need to occur simultaneously in some patients while in other patients some of them may be inappropriate or even dangerous and have no role.

(a) ABC's (Airway-Breathing-Circulation).

Ensuring and protecting an adequate airway and maintaining effective ventilation are paramount in managing the poisoned patient. Many agents produce sedation, leading to loss of airway protection and the risk of vomiting and aspiration. Maintaining adequate perfusion of the brain, heart, and kidneys can usually be accomplished with intravenous fluids and pressors such as dopamine. In the patient with altered mental status, the following drugs are given.

Oxygen

Narcan (naloxone) 2mg 1V push

Thiamine 100mg IV push

D50 1 AMP IV push (or check dextrostick to R/O hypoglycemia)

(b) Decontamination.

The first goal in managing the adequately resuscitated poisoned patient is minimizing further exposure to the toxin by decontamination. For dermal exposures, decontamination of the skin should be accomplished quickly by removing all contaminated clothing and washing the skin thoroughly with soap and water while protecting care providers from secondary exposure. Ocular decontamination is accomplished by copious irrigation using tap water or normal saline. Gastrointestinal decontamination may be accomplished by the following methods: Note: The single most effective method to decontaminate the GI tract is with the use of activated charcoal.

Emesis

Syrup of ipecac has a very limited role currently because of the risk of aspiration in the patient whose mental status may decline, and because it is less effective than activated charcoal alone. It is contraindicated in caustic ingestions or in patients with an altered mental status or in the ingestion of any agent which may lead to seizures or coma. Complications include aspiration, Mallory Weiss tear, esophageal tears, and electrolyte imbalance.

Gastric Lavage

May be more effective than emesis, but is of limited use if more than an hour has passed from the ingestion. Lavage is performed using a large (36F) orogastric tube with the patient in the left lateral decubitus position. Use saline in small aliquots of 100-200cc lavage with a total of 2 liters or until the return is clear.

Adsorbent (activated charcoal)

Administration of 1 to 2 gm/kg of activated charcoal orally (PO) or via a nasogastric (NG) tube is adequate gut decontamination for the majority of patients. Activated charcoal does not bind iron, heavy metals, hydrocarbons, or alcohols well, but should be given in the event other co-ingestants are present.

Whole-bowel Irrigation.

Using Go-Lytely, 2L/hour PO or via a nasogastric tube for 5-6 hours. This may be indicated after ingestion of substances poorly bound to charcoal (iron, lithium), extended-release preparations (Theodur, calcium channel blockers), foreign bodies (button batteries), and drug packets (heroin, cocaine, condoms).

(c) Aggressive Supportive Care.

When combined with resuscitation and decontamination, aggressive supportive care to prevent and manage complication is key to the successful management of the vast majority of poisoning exposures. Therefore, early consultation and possible transfer is generally indicated due to limited resources available to most GMOs.

(d) Enhanced Elimination

Techniques for removing toxins after they have already been absorbed into the systemic circulation are seldom indicated or applicable, but at times they may be central to the management of certain toxins.

Alkaline diuresis (salicylates): alkalinize the urine to a pH of 8.0 by administering normal saline with 1-2amps of bicarbonate per liter and adequate potassium replacement.

Repeat-dose activated charcoal (theophylline, phenobarbital, carbamazepine): 0.5gm/kg PO or NG every 4 hours to produce gut dialysis and interrupt enterohepatic recirculation.

Hemodialysis (salicylates, methanol, ethylene glycol, lithium): consult with a toxicologist or nephrologist for recommendations.

(e) Specific Antidotes

Appropriately administered antidotes may prevent further complications, morbidity and

mortality, but most antidotes have potential adverse effects and may not be indicated in a given patient. Seek advice when considering the use of an antidote. The following list includes some of the more useful antidotes.

(1) Acetaminophen
Mucomyst 140mg/kg 1st dose, then 70mg/kg every 4 hours for 17 additional doses.

(2) Tricyclic antidepressants
Sodium bicarbonate 1 to 2 amps IV push, then infusion of bicarbonate in D5W to keep the arterial pH 7.50.

(3) Isoniazid (INH)
Pyridoxine (vitamin B6) same amount as INH ingested if known; if unknown, give 5gm IV.

(4) Narcotics
Naloxone (Narcan) 2mg IV push (some narcotics may require larger doses or continuous infusions).

(5) Cyanide
Lilly Cyanide Antidote Kit (amyl nitrate pearls, sodium nitrite, sodium thiosulfate vials-see insert for directions).

(6) Carbon Monoxide
100 percent oxygen followed by hyperbaric oxygen.

(7) Iron
Deferoxamine 10 to 15mg/kg/hr.

(8) Beta blockers
Glucagon 1 to 5mg IV push, repeat as necessary.

(9) Anticholinegics

Physostigmine 1 to 2mg IV push - (use only for dysrhythmias with hypotension, intractable seizures, or coma with respiratory compromise; intubation should be performed first; contraindicated in TCA overdose).

(10) Insecticides/organophosphates

Atropine IV (may require large doses), followed by Pralidoxime (2- PAM)

(11) Benzodiazepines

Flumazenil (Romazicon) 0.5 to1mg increments IV, total dose rarely to exceed 3mg (do not use if coingestion of an epileptogenic drug).

(12) Oral hypoglycemics

For intractable hypoglycemia, not responsive to IV glucose, use diazoxide 300mg IVPB over 30 minutes.

(13) Calcium Channel Blockers:

Calcium chloride, 1 to 2amps (100 to 200mg) over 2 to 5 minutes. May repeat to effect, and may need continuous infusion. Consider atropine 1 to 2 mg or glucagon 3 to 10mg for A-V block or profound bradycardia. May require pressors and pacing.

(14) Cocaine

Control seizures with benzodiazepines, control hypertension with lopressor and nitroprusside. Caution: the use of beta blockade alone increases mortality due to unopposed alpha effects.

Which one of the following statements is true regarding tuberculosis testing and evaluation?

a.The CDC recommends two-step screening of new employees of long-term care facilities using a booster dose of Mantoux followed by repeat testing in 1-2 weeks
b.BCG vaccine should be considered for TB prevention in HIV-positive patients
c.A positive Mantoux test is defined as erythema greater than 10 mm in diameter at 48-72 hours, or greater than 5 mm in patients who are HIV positive, who have recent documented TB contact, or who have radiologic evidence of old TB
d.Tuberculin testing should not be given on the same day as live virus vaccines
e.Patients who report a positive skin test many years ago but cannot recall any details should be retested and the induration measured and documented

A

Mantoux testing of high-risk patients is becoming more important with the reemergence of tuberculosis and the emergence of HIV disease. A patient who reports a positive test in the past should not be retested, as no further information would be obtained and adverse reactions could occur. TB testing can be done at the same time as live virus vaccines are given but should not be done within 4 to 6 weeks afterward due to the possibility of interference and a false reaction. A Mantoux is measured by the amount of induration only, and erythema should be ignored. BCG is contraindicated in an HIV-infected patient. The booster method is

recommended for testing high-risk elderly patients and employees and residents of long-term care institutions.

A 22-year-old sexually active white female comes to your office for a pelvic examination. She has no complaints, but you find a flat wart on her cervix.

The most appropriate management is

a.explaining to her that warts are harmless, although contagious, and giving her the option of having it treated or left alone
b.reassuring her of the benign nature of these lesions and offering her treatment with either podophyllin or liquid nitrogen
c.reassuring her if her Papanicolaou test is negative, and scheduling a return visit in 3 months
d.performing a colposcopically directed biopsy of the lesion to rule out cervical neoplasia
e.freezing the lesion at this visit to help prevent spread to her sexual partner

D

A flat wart should be biopsied to exclude cervical neoplasia. Treatment should be delayed until the biopsy results are known. Basing the decision on the results of a Papanicolaou test is

inappropriate because of the possibility of false-negative results, which occur 10% to 30% of the time.

A 23-year-old man presents for a persistent, slowly worsening rash to the face. He states that it first occurred in January; it is now March. He denies any pruritus. He has experienced some relief with over-the-counter 0.5% topical hydrocortisone. The patient has tried changing soaps and shampoos without effect. He notes a fair amount of cosmetically unacceptable scale, including the scalp area, which he has been attempting to wash off. Past medical history and review of systems are unremarkable, and the patient is using no medications. What is most likely diagnosis?

A seborrheic dermatitis
B acne
C psoriasis
D keratosis pilaris
E hidradenitis suppurativa

Answer is A. The correct diagnosis is seborrheic dermatitis. This very common disorder predominantly affects the scalp and face, although there is generally more involvement of the forehead and eyebrows and less chin involvement than seen in this patient. Seborrheic dermatitis can also affect the upper chest and groin area. The typical eruption involves a greasy appearance (which patients may interpret as a hygiene issue) and scale, which may be yellow in appearance. With scalp involvement, dandruff is the result; in many patients, this is the complete manifestation of the disorder. Seborrheic dermatitis patients tend to have had

their symptoms for some time before coming in; symptoms are likely to be more pronounced in late fall and winter.

West Nile Virus

In the summer of 1999, West Nile virus infection of epidemic proportions was a concern solely for New York City and surrounding counties. However, by the end of the year 2000, West Nile virus activity had been identified in 12 states — from as far north as Vermont and New Hampshire to as far south as North Carolina. What is this potentially dangerous, vector-borne disease, and what course could it take in the future?

A definitive diagnosis can be made only through laboratory testing of cerebrospinal fluid and acute and convalescent serum specimens to detect immunoglobin M antibody by enzyme-linked immunosorbent assay.Treatment for WNV is supportive; in more severe cases, it may include hospitalization with airway management and administration of intravenous fluids.

Surveillance and prevention

According to the Centers for Disease Control and Prevention, surveillance strategies should be implemented in areas where no system exists, or strengthened in regions where a system does exist. These strategies include active surveillance (ie, local health department solicitation of dead bird and mosquito population reports from health care providers) and enhanced passive surveillance (health department-issued general alerts to encourage key health care personnel to

report cases of human viral encephalitis and neurologic disease in other mammals). Measures for disease prevention should include eliminating mosquito-breeding habitats and controlling the adult mosquito population and mosquito larvae with the systematic use of insecticides.

Recommended Regional Surveillance Strategies

Northeastern United States. Active surveillance and enhanced passive surveillance of human cases, with an emphasis on urban and surrounding areas, should begin in early spring and continue through the fall until mosquito activity ceases because of cold weather.

Southeastern United States. Because of the year-round warm weather here, this region should implement continual active surveillance and enhanced passive surveillance.

Western and Central United States. WNV infection could conceivably spread to this region of the United States through birds migrating from Central and South America. The medical community should maintain active dead bird surveillance and enhanced passive human surveillance starting in early spring.

Other Areas of the Western Hemisphere. Canada, the Caribbean, and Central and South America should be encouraged to develop surveillance systems in their respective locations

The American Cancer Society recommends that men age 50 and over have prostate-specific antigen determination annually; however, the United States Preventative Services Task Force recommends against such studies. Each of the following statements represents a valid argument against annual prostate-specific antigen measurement EXCEPT

A Randomized studies have not yet shown a survival benefit for patients who are screened compared to those who are unscreened
B Early unimportant tumors may be detected in the screening group
C Screening may lead to net harm
D Most tumors are surgically incurable at the time of detection
E PSA screening may not lead to a change in the natural history of prostate cancer, but rather make it appear that life is prolonged after screening due to lead time bias

The answer is D
In order to definitively prove that a screening test is worthwhile, a randomized controlled trial comparing screened and unscreened patients with cause-specific mortality as the endpoint is required. Any other endpoint, such as a reduction in the incidence of advanced stage disease, improved survival, or a stage shift, provides less clear-cut support of benefit. No such trials have been completed with regard to prostate-specific antigen screening. Moreover, screening for prostate-specific antigen is fraught with many potential biases. For example, the test may not lead to any change in the natural history of prostate-cancer (lead-time bias); the patient may be diagnosed at an earlier date and appear to survive longer, but life is not really prolonged. Second, length bias, which refers to the detection of slow-growing less aggressive cancers, is certainly a problem with prostate-specific antigen screening. It is highly likely that

prostate-specific antigen screening will lead to overdiagnosis with many patients will be found to have prostate cancer in whom this disease never would have been a problem. It is not clear whether the most effective treatment for low-stage prostate cancer is radical prostatectomy, radiation therapy, observation, or possibly even early hormonal therapy. As such, treating low-stage prostate cancers will certainly cause excess morbidity, including impotence or urinary incontinence.

Two years ago a 69-year-old man was found to have a prostate nodule on routine examination. Biopsy revealed poorly differentiated prostatic adenocarcinoma; staging studies failed to reveal any evidence of extraprostatic spread. Because of a desire to maintain potency, the patient opted for radiation therapy as primary treatment. Except for requiring lower extremity revascularization for intractable claudication, he did well until recently, when he developed pain in his right hip. Prostate specific antigen was elevated. Bone scan revealed areas of positive uptake in the pelvis and ribs (not present on the original staging study). The patient expresses a desire not to have a bilateral orchiectomy, "unless it would significantly improve my quality of life or survival compared with other therapies."
The most appropriate strategy at this point is to

A biopsy one of the bony lesions
B administer cisplatin and 5-fluorouracil
C administer leuprolide and flutamide
D administer diethylstilbestrol (DES) at low dose
E perform an orchiectomy

The answer is C

Given the poorly differentiated histology at presentation with the associated high risk of recurrence and the characteristic indicators of metastatic prostate cancer, biopsy is unnecessary. Since the patient has symptomatic disease, he should be started on androgen deprivation therapy, which is likely to cause a decrease in his pain. An equivalent response rate has been demonstrated with bilateral orchiectomy, diethylstilbestrol, and luteinizing hormone releasing hormone (LHRH) analogues such as leuprolide. Given his desire not to have an orchiectomy and his vascular disease, LHRH analogues would be the best approach.Prostatic carcinoma is poorly responsive to chemotherapy.

Management of DUB

Mild:
reassurance
Menstral calendar
Oral OCP

Severe or recurrent DUB without anemia:

Medroxyprogesterol 10 mg for 10 days
OCP if the patient is sexal active

Acute bleeding in a stable patient:
OCP one pill/6 hr untill bleeding stop
After bleeding stop,tape the OCP to routine dose and continue for 3-6 month

Acute bleeding associated with anemia and hypotension
Admission
Transfusion
Lab:CBC Pt/Ptt Blood T/C
IV estrogen 23 mg/4-6 hr
Cyclic progesterol dominant OCP
One pill/6Hr/3 day-one pill/8 hr/3days-one pill/12 hr/2wks-continue OCP for two months

A 25-year-old man visits his primary care physician because of a 1-month history of pain and swelling in his right testicle. The patient has no history of cryptorchidism or recent trauma. Physical examination reveals a normal left testis and a tense right hydrocele that precludes examination of the right testicle. Which of the following is the most appropriate next step in the treatment of this patient?

Antibiotic therapy for epididymoorchitis

Needle aspiration of the right hydrocele

Scrotal ultrasonography

Surgical repair of right hydrocele

C

Differentiating between a hydrocele and an acute scrotum (eg, testicular torsion, strangulated hernia) is important.

As many as 50% of acute scrotum cases are initially misdiagnosed.

Transillumination is not diagnostic and cannot rule out an acute scrotum.

Ultrasound anatomic imaging with Doppler evaluation of testicular blood flow is indicated when an acute scrotum is suspected, as follows:

A traumatic hemorrhage into a hydrocele or testes

A testicular torsion with or without a secondary hydrocele

An ischemic testicle

A general surgery evaluation is indicated for patients with a tense hydrocele that threatens to embarrass the scrotal circulation. Surgical evaluation is also indicated for hydrocele producing a large and bulky mass that is unsightly or uncomfortable

Immediately consult a urologist if testicular torsion is found or suspected.

A 30-year-old man sees his primary care physician for advice regarding prostate cancer screening. He states that his father was recently diagnosed with prostate cancer at age 69 years. His father also has a history of noninsulin-dependent diabetes mellitus and hypertension. At what age should this patient be advised to obtain prostate-specific antigen screening?

30 years
40 years
50 years
60 years

50

The U.S. Food and Drug Administration (FDA) has approved the PSA test for use in conjunction with a digital rectal exam (DRE) to help detect prostate cancer in men age 50 and older
The FDA has also approved the PSA test to monitor patients with a history of prostate cancer to see if the cancer has come back (recurred).
Several risk factors increase a man’s chances of developing prostate cancer. These factors may be taken into consideration when a doctor recommends screening. Age is the most common risk factor, with more than 96 percent of prostate cancer cases occurring in men age 55 and older. Other risk factors for prostate cancer include family history and race. Men who have a father or brother with prostate cancer have a greater chance of developing prostate cancer. African American men have the highest rate of prostate cancer, while Native American men have the lowest.
Recommendations for screening vary. Some encourage yearly screening for men over age 50;

others recommend against routine screening.
The PSA level that is considered normal for an average man ranges from 0 to 4 nanograms per milliliter (ng/ml). A PSA level of 4 to 10 ng/ml is considered slightly elevated; levels between 10 and 20 ng/ml are considered moderately elevated; and anything above that is considered highly elevated. The higher a man's PSA level, the more likely it is that cancer is present.

an asymptomatic 24yo woman is seen at 10weeks gestation. a urine culture shows a positive growth e.coli 100,000 CFU/mL. which of the following statement is NOT true?
1) if the patient is not treated, she has a 30% chance of developing pyelonephritis
2)if the patient is treated, her chance for recurrence will be approximately 30% during this pregnancy
3) patients with recurrent bacteriuria should be placed on suppressive therapy
4) the incidence of asymptomatic bacteriuria is higher in pregnant women

i am confused,
correct answer is 2 as kaplan said...
but asx. bacteriuria is similar to the nonpregnant population even APN,cystitis is higher in preg.group...
so...4 is right?

Asymptomatic Bacteriuria

2 or B

A. Diagnosis requires >100,000 CFU/ml of urine of same organism in two clean-catch specimens or >100 organisms on a single catheterized specimen.
B. Must be distinguished from contamination from vaginal or urethral organisms attributable to poor technique in specimen collection. Treat based on C&S, not empirically.
C. The only patients who should be treated for asymptomatic bacteriuria include those who (1) are pregnant, (2) have had a past urologic pro-cedure, (3) have recently had the removal of an indwelling catheter, (4) have diabetes mellitus, or (5) are children. Asymptomatic bacteriuria is not an indication for treatment with antibiotics in the elderly, because treatment does not affect the outcome in these patients.
D. Between 2 and 10 percent of pregnancies are complicated by UTIs; if left untreated, 25 to 30 percent of these women develop pyelonephritis. Pregnancies that are complicated by pyelonephritis have been associated with low-birth-weight infants and prematurity. Thus, pregnant women should be screened for bacteriuria by urine culture at 12 to 16 weeks of gestation.
E. Pregnant women with asymptomatic bacteriuria should be treated with a three- to seven-day course of antibiotics, and the urine should subsequently be cultured to ensure cure and the avoidance of relapse. Although amoxicillin is frequently suggested as the agent of choice, E. coli is now commonly resistant to ampicillin, amoxicillin and cephalexin. Thus, treatment should be based on the results of susceptibility tests.

A 24-year-old woman presents with a sudden onset of diplopia. On examination she is unable to adduct the left eye past the midline. Nystagmus is noted in the right eye on abduction. Otherwise, extraocular movements are normal. The most likely location of the lesion is the

A right frontal lobe
B left labyrinth
C midbrain, affecting the rostral interstitial nucleus of the medial longitudinal fasciculus
D left occipital cortex
E left upper pons, affecting the medial longitudinal fasciculus

The answer is E
A lesion of the right frontal lobe involving the cortical gaze center would result in a gaze preference to the right. A left labyrinthine lesion would cause bilateral nystagmus and vertigo. The rostral interstitial nucleus of the medial longitudinal fasciculus (MLF) controls vertical gaze, which is not affected in this case. A lesion of the left occipital cortex would result in a right homonymous hemianopia. The MLF connects the horizontal gaze center in the pons with the oculomotor nuclei. Lesions of the MLF, which are common in multiple sclerosis, result in an internuclear ophthalmoplegia, or failure of adduction of the eye on the side of the lesion, accompanied by contralateral nystagmus.

A 38-year-old man presents with acute low back pain radiating into the posterior aspect of the right thigh and continuing down to the lateral aspect of the foot. On examination, the right patellar reflex is normal but the right Achilles tendon reflex is depressed compared with the left. Muscle power in the right lower extremity is full when the patient is examined in the supine position. The patient can stand on his heels and on the toes of the left foot, but the right toes are weak. Magnetic resonance imaging of the lumbosacral spine reveals a right-sided disk protrusion. The most likely site of disk pro- trusion is the

A L2-L3 interspace
B L3-L4 interspace
C L4-L5 interspace
D L5-S1 interspace
E S1-S2 interspace

The answer is E
A disk at the L2-L3 interspace would compress the L2 root. There may be weakness of hip flexion and sensory loss along the upper border of the thigh below the inguinal ligament. No tendon reflex is mediated by this root. A lesion of the L3 root would cause weakness of hip flexion and knee extension and sensory loss over the midportion of the anterior thigh. No tendon reflex is mediated by this root. A lesion of the L4 root would result in a depressed or absent patellar reflex, weakness of knee extension and foot dorsiflexion, and sensory loss over

the anterior knee and the medial portion of the foreleg. A lesion of the L5 root would result in weakness of knee flexion, dorsiflexion of the ankle and great toe, and weakness of inversion and eversion of the foot. Sensory loss would be noted over the lateral aspect of the foreleg and the dorsal surface of the foot. A lateral disk protrusion at the S1-S2 interspace would compress the S1 nerve root. The S1 root mediates the Achilles tendon reflex, innervates part of the gastrocnemius, and provides sensation to the lateral aspect and sole of the foot.

A 66-year-old woman who has previously been healthy undergoes emergency surgery for a ruptured abdominal aortic aneurysm. Intraoperatively she requires 8 units of packed red blood cells to maintain her blood pressure and hematocrit. After surgery she is hemodynamically stable. On the third postoperative day she appears jaundiced, but abdominal examination is unremarkable and she is afebrile. Total serum bilirubin concentration at this time is 141 mol/L (8.3 mg/dL) [direct, 107 mol/L (6.3 mg/dL)]. Serum alkaline phosphatase level is 6 kat/L (360 U/L), and serum AST level is 0.85 kat/L (51 Karmen units/mL). The most likely explanation for the woman's jaundice is

A: a stone in the common bile duct
B: halothane hepatitis
C: posttransfusion hepatitis
D: acute hepatic infarct
E: benign intrahepatic cholestasis

The answer is E

Benign postoperative intrahepatic cholestasis can develop as a consequence of major surgery for a catastrophic event in which hypotension, extensive blood loss into tissues, and massive blood replacement are notable. Factors contributing to jaundice include the pigment load from transfusions, decreased liver function resulting from hypotension, and decreased renal bilirubin excretion caused by tubular necrosis. Jaundice becomes evident on the second or third postoperative day, with bilirubin levels (mainly levels of conjugated bilirubin) peaking by the tenth day. Serum alkaline phosphatase concentration may be elevated up to tenfold, but aspartate aminotransferase (AST) levels are only mildly elevated. Hepatitis, choledocholithiasis, and hepatic infarct are unlikely diagnoses in the absence of abdominal tenderness, fever, or a significant rise in AST levels. The incubation period of posttransfusion hepatitis is 7 weeks, making this diagnosis unlikely.

A 3-week-old white female who is being fed a formula with a cow's milk base is brought to your office with a 4-day history of dark blood flecks in otherwise normal appearing stools. Other history is unremarkable. A physical examination reveals yellow, curdy, guaiac-positive stool. Anal and rectal examinations are normal, as is the rest of the examination.

The best course of action would be to

a.draw blood for CBC, BUN, and electrolytes, and start intravenous fluids
b.culture the stool for rotavirus
c.obtain upper and lower GI barium fluoroscopy studies
d.perform an alkali denaturation test on the stool to rule out a maternal source for the blood
e.suggest a change to a soy-based formula

E? or A?

infants who have cow milk allergy will have soy milk allergy also

A 15-year-old white male is seen in the emergency department because he took approximately 17 grams of acetaminophen about 6 hours ago. A plasma acetaminophen level indicates a high risk for hepatic toxicity.

Which one of the following is the most beneficial management at this time?

a.Gastric lavage to clear stomach contents

b.Observation only, with AST and plasma acetaminophen levels checked every 4 hours

c.Therapy with N-acetylcysteine (Mucomyst, Mucosil)

d.Peritoneal dialysis

e.Oral activated charcoal

C

In all cases of suspected acetaminophen toxicity, a plasma acetaminophen level should be obtained at least 4 hours post ingestion. Serum levels drawn before this time may not represent peak values. The value of this level should be plotted on a standard nomogram to determine whether antidotal treatment is indicated. N-acetylcysteine is widely accepted as the antidote of choice for prevention of hepatotoxicity associated with acetaminophen overdose. It should be administered until up to 24 hours after ingestion; however, it is most effective when administered prior to 16 hours post ingestion. Gastric lavage alone is inadequate therapy in the case described. Peritoneal dialysis and oral activated charcoal are acceptable therapeutic approaches to some acute overdoses, but N-acetylcysteine is the specific and preferred antidote for acetaminophen poisoning.

Pediatrics: Stridor and Dyspnea

Epiglottitis.

Definition. Infection of the epiglottis and of the aryepiglottic folds and surrounding soft tissues. Becoming less common since use of H. influenzae vaccine. Is more common in adults in whom it presents as a severe sore throat with drooling, neck tenderness.

Cause. Almost always by H. influenzae type B. Other causes: beta- hemolytic streptococci, Staphylococcus aureus, and Streptococcus pneumoniae.

Clinical presentation. May occur at any age, with a peak incidence at 2 to 7 years. Presents with sudden onset of high fever, respiratory distress, severe dysphagia, drooling, muffled voice, and a toxic appearance. Stridor, if present, may be mild in comparison to croup. Often there is little or no coughing. Child typically prefers being upright in "sniffing" position.

Lab tests. Invasive procedures and examinations should be avoided until after airway is secured. CBC and blood and epiglottic cultures may then be obtained. Radiographs of lateral area of neck shows characteristic swollen epiglottis (thumb sign). Never send a child suspected of having epiglottitis to be radiographed unaccompanied by someone who can emergently manage airway.

Treatment.

Do not move, upset, or lay child down unless prepared to manage obstructed airway.

Airway. In an emergency, a bag-valve-mask can buy time. Consider a needle cricothyrotomy. Controlled intubation by an experienced operator is preferred. Tracheostomy is acceptable if unable to intubate. Usually safely extubated in 48 to 72 hours after appropriate antibiotics are started. Airway must be secure. Top of size 3 ET tube fits on Luer-lok needle, allowing for easy bagging.

Antibiotics. Initiated once artificial airway secure. Cefotaxime 50 to 200 mg/kg/24 hours divided Q6h or ceftriaxone 75 mg/kg Q24h are the first-line drugs with TMP/SMX as a second-line agent.

Admission to ICU. Use proper sedation and restraints during period of intubation. Antibiotics continue for 7 to 10 days after extubation.

Croup (Laryngotracheobronchitis).

Definition. A syndrome of airway swelling in the glottic and subglottic area of viral origin.

Causes. Parainfluenza virus types 1 and 3 responsible for majority of cases; remainder respiratory syncytial virus, influenza virus, and adenovirus.

Clinical presentation. Age usually 6 months to 6 years. Symptoms of the common cold usually precede onset. Brassy cough (seal bark), hoarseness, and inspiratory stridor are characteristic. If severe may include retractions, decreased air entry, and cyanosis. Usually benign course but can progress to obstruction.

May be resolved by presentation to office or ED from exposure to cool air.

Must differentiate from epiglottitis and bacterial tracheitis, which require emergent management. See Table 12-9.

Classification.

Very mild. Intermittent stridor, present when awake or excited, goes away when sleeping.

Mild. Continuous stridor when awake or asleep not audible without stethoscope.

Moderate. Continuous stridor audible without stethoscope and may be accompanied be sternal retractions.

Severe. Continuous stridor with evidence of respiratory failure, that is, cyanosis, altered mental status.

Lab tests. Usually not indicated and may induce further agitation with respiratory compromise. If in doubt and no need for emergent airway management, AP radiograph of neck may show subglottic narrowing (steeple sign).

Management.

Calm the child on the parent’s lap and provide cool, humidified air.

Oxygen if saturation <95%.

Reassess status after 15 to 30 minutes.

If mild classification, consider discharge with instructions for cool mist humidifier.

If moderate classification.

The traditional treatment has been nebulized racemic epinephrine, 2.25% solution, 0.5 ml diluted in 3 ml of saline.

Nebulized epinephrine, 5 ml of 1:1000, has been shown to be as safe as, at least as good as, and perhaps superior to racemic epinephrine. May repeat PRN.

There is no "rebound effect" from epinephrine, but patients may return to their pretreatment

state.

Steroids. Generally those who need nebulized epinephrine should also be treated with dexamethasone 0.6 mg/kg/dose IM or PO up to 10 mg. Although not standard of care, nebulized budesonide 1 mg given twice at 30-minute intervals is effective in mild-to-moderate croup and may prevent the need for systemic steroids. However, up to now, it has not been compared to dexamethasone in any trial.

Continuation of cool, humidified air may also be helpful.

Disposition. Patients may be discharged with instructions for cool mist humidifier if, after 3 to 6 hours of observation, they require no further treatment with epinephrine and their croup is mild. If patient remains in the moderate classification, hospitalization with epinephrine or racemic epinephrine PRN and dexamethasone 0.25 to 0.5 mg/kg/dose Q6h for 2-4 doses.

If in severe classification, the decision to intubate should be left to experienced personnel and, when feasible, be performed in the operating room. Management is as above while awaiting trained personnel for sedation and intubation.

Foreign-Body Aspiration.

Clinical presentation. Majority 3 months to 6 years. Have triphasic history:

Initial cough, choking, gagging, stridor, wheeze.

FB then passes into smaller airways and have silent phase.

Then have recurrent pneumonia, wheezing, abscess, bronchiectasis.

A third not witnessed or not remembered by caregiver.

Radiographs. Can show air trapping on exhalation but one fourth have normal radiograph.

Radiography is only 50% specific. Do CXR with patient lying on affected side. Dependent lung will not deflate normally if there is foreign body obstruction.

Bronchoscopy. Diagnostic procedure of choice if there is any question.

Treatment.

Without respiratory distress. Refer for removal by bronchoscopy.

Respiratory distress present.

If the patient is breathing, do not interfere; allow the child’s efforts to attempt to clear the foreign body.

If not moving air, American Heart Association obstructed airway maneuvers should be employed. For infants, 5 interscapular back blows with the child's head lower than the chest, alternating with 5 chest compressions. In older children, Heimlich maneuver. Advanced cardiac life support protocol should be initiated if necessary.

Bag-valve-mask ventilations can convert a total obstruction to a partial one by pushing foreign body into a main bronchus.

Immediate direct laryngoscopy and removal with Magill forceps should be performed.

If unsuccessful, cricothyrotomy or intubation if needed.

Prevention. Infants and young children should not eat nuts, popcorn, hot dogs, uncooked carrots, whole grapes, or hard candies. Balloons and surgical gloves are especially dangerous for young children. Dice food. Avoid small toys. Educate parents.

Bronchiolitis.

Epidemiology. Illness of young children and infants. Most serious in first 2 years of life. Respiratory syncytial virus (RSV) principal agent. Also associated with parainfluenza, adenovirus, Influenza virus, rhinovirus. The majority occur during winter but can occur any season.

Clinical presentation. Rhinorrhea, sneezing, coughing, low-grade fever. Onset of rapid breathing and wheezing. Signs of respiratory distress in severe cases: nasal flaring, tachypnea, prolonged expiratory phase, retractions.

Lab tests. CBC usually within normal limits. Blood gas, O2 saturation levels, as appropriate. Nasal wash for RSV culture and antigen assay. CXR can be normal but occasionally shows air trapping and peribronchial thickening.

Treatment.

Indications for hospitalization. Use clinical judgment. Some suggested criteria include <6 months old, resting respirations >50 to 60, pO2, <60 mm Hg, pulse oximetry 95%, apnea, unable to tolerate oral feedings.

Supportive measures. Antipyretics, IV fluids, humidified O2, nebulized bronchodilators, such as albuterol 2.5 mg in 3 ml of NS; this can be repeated PRN. Oral albuterol can be used (0.1 mg/kg Q8h up to 12 mg) but is much less effective. Epinephrine, 5 ml of 1:1000 by nebulizer

is safe and effective and is an alternative. Steroids are ineffective. However, they continue to be widely used in doses similar to those for asthma.

Ribavirin aerosol. The efficacy of ribavirin has recently been called into question. The use of ribavirin even in severely ill patients is at the discretion of the physician. If croup or bronchiolitis secondary to RSV, consider use of ribavirin in high-risk groups.

Congenital heart disease

Chronic lung disease (such as bronchopulmonary dysplasia)

Infants <6 weeks of age

Neurologic disorders

Immunosuppressed

Severely ill infants.

PaO2 <65 mm Hg or SaO2 <90%

Increasing pCO2

Intubation and mechanical ventilation as indicated.

Respiratory syncytial virus immunoglobulin (RSV-IVIG) 750 mg/kg IV Q30 days can prevent RSV infection and hospitalization in those children with severe underlying illness such as bronchopulmonary dysplasia or prematurity. An alternative is Synagis (Palviziumab), an RSM immunoglobulin that can be given IM (15mg/kg/dose IM Q month). Use with caution in those with thrombocytopenia or coagulation defects because of intramuscular bleeding.

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Screening Recommendations

Cholesterol

All men aged 35 and older and all women aged 45 and older should be screened routinely for lipid disorders.

Younger adults—men aged 20-35 and women aged 20-45—should be screened if they have other risk factors for heart disease. These risk factors include tobacco use, diabetes, a family history of heart disease or high cholesterol, or high blood pressure.

Clinicians should measure HDL in addition to measuring total cholesterol or LDL. There is insufficient evidence to recommend for or against measuring triglycerides.

The optimal frequency of screening has not yet been determined, but every five years seems reasonable. Longer intervals may be appropriate in persons with normal cholesterol and no risk factors for CAD.10

Hypertension

Screening of all adults is recommended at least every two years. Hypertension currently is defined as blood pressure >140/90, though this is more an arbitrary cutoff level than a biological one. In fact, cardiovascular mortality begins to increase at systolic pressures >110 mm Hg, and diastolic pressures > 70 mm Hg.

Hypertension should be diagnosed using an average of more than one reading taken at each of three separate visits. Once confirmed:

Patients should be counseled concerning physical activity, dietary sodium intake, weight loss, and alcohol intake.
Risk factors for CAD such as elevated cholesterol and smoking should be assessed.
Decisions on beginning drug therapy should be based on the level of blood pressure elevation, patient's age, concomitant disease, risk factors, and evidence of target-organ damage.
All patients should be counseled concerning physical activity and weight control as primary prevention of hypertension.

Breast Cancer

Screening women 50 to 75 years of age with mammography significantly decreases the death rate from breast cancer. There is some controversy surrounding the screening of women between the ages of 40 and 49 because early studies showed no improvement in survival rates. However, several studies now show a significant reduction in mortality rates in women in this age group who receive mammograms.11

There is not enough evidence to prove the effectiveness of clinical breast exams (CBE), but most groups recommend annual CBE beginning at age 40.

There is no evidence of benefit in screening women over the age of 75, but each case should be considered on an individual basis.

There is insufficient evidence to recommend for or against teaching breast self-examination.

Colorectal Cancer

Screening for colorectal cancer is recommended for all persons aged 50 and older with fecal occult blood testing (FOBT) and/or flexible sigmoidoscopy.

There is not enough evidence to determine whether FOBT or sigmoidoscopy is the more effective screening tool, or whether there is an advantage in combining the two methods.

FOBT should be done on an annual basis, with the patient following the recommended guidelines for dietary restrictions, collection, and storage.

The optimal frequency of performing flexible sigmoidoscopy is not known, but most experts recommend screening every three to five years.

High risk patients (i.e., familial polyposis, HNPCC, ulcerative colitis, adenomatous polyps, or colon cancer) should have earlier and more frequent screening.

Digital rectal examination (DRE) has poor sensitivity and specificity as a screening test, and although it is recommended by a number of organizations the USPSTF found insufficient evidence to recommend for or against DRE as a screening tool for colorectal cancer.

Cervical Cancer

Regular Pap smear screening is recommended every one to three years in all women with a cervix who are or have been sexually active or who are 18 years of age or older.

There is no evidence that screening annually leads to a better outcome than screening every three years, but screening schedules for individual patients should be determined with consideration of that patient's risk factors for cervical cancer.

Pap smears probably can be discontinued after age 65 if the patient has received regular screening prior to that time and if all of the patient's smears have been normal. Screening after hysterectomy is not necessary unless cancer was the reason for the surgery.

Prostate Cancer

The USPSTF recommends against routine screening for prostate cancer with DRE, prostate specific antigen (PSA), or transrectal ultrasound. The ACS and the American Urological Association recommend annual DRE beginning at age 40, and PSA measurement beginning at age 50 (age 40 for African American men), but there is no evidence that screening for prostate cancer results in reduced morbidity or mortality.

The prevalence of prostate cancer found incidentally at autopsy in men ages 70 to 79 is reported to be as high as 66%, and although millions of men will have prostate cancer when they die, only a small percentage will die from their cancer. There currently is no good screening method to distinguish between aggressive and indolent cancers, and screening can in fact expose patients to potential complications of treatment such as incontinence, impotence, and even death.

If screening is to be performed, the patient should be informed of the potential benefits and risks of screening.

If screening is performed, the best approach is DRE and PSA in men with a life expectancy of >ten years.

Influenza Vaccination

Recommended for all persons 50 years of age and older.9 Also recommended for patients considered to be at high risk for the complications of influenza, including residents in chronic care facilities, and patients with chronic cardiopulmonary disorders, metabolic diseases (including diabetes mellitus), hemoglobinopathies, immunosuppression, or renal dysfunction. The vaccine also is recommended for health care workers who care for high risk patients.

Amantadine or rimantadine prophylaxis is recommended for high-risk persons after exposure or during an epidemic. Medication may be started at the time of immunization and continued for two weeks. If the vaccine is contraindicated, amantadine or rimantadine should be continued daily for the entire season of influenza activity in the community.

Pneumococcal Vaccination

Recommended for all immunocompetent persons 65 years of age and older and those at increased risk for pneumococcal disease. High-risk groups include institutionalized persons >50 years of age, and persons two years of age or older with chronic cardiac or pulmonary disease, diabetes mellitus, or anatomic asplenia.

Though routine revaccination is not recommended at the present time, it should be considered in individuals at highest risk for pneumococcal disease who were vaccinated more than five years previously.

There is not enough evidence to recommend for or against routine vaccination for immunocompromised patients, but many authorities cite a high incidence of pneumococcal disease in this population and a low incidence of severe side effects from the vaccine as reasons to give it. (Immunocompromised conditions associated with a high incidence of pneumococcal disease include alcoholism, cirrhosis, chronic renal failure, nephrotic syndrome, sickle cell disease, multiple myeloma, metastatic or hematological malignancy, acquired or congenital immunodeficiency, and organ transplant.)

Hepatitis B Vaccination

Recommended for all young adults not previously immunized, as well as for those at high risk for acquiring the disease, such as homosexual men, injection drug users and their sexual partners, persons with multiple sexual partners or those who have recently acquired another sexually transmitted disease, patients who receive

blood products, and health care workers who are frequently exposed to blood or blood products.

Td Vaccine Series

Should be completed for all patients who did not receive the primary series. The optimal frequency of booster doses has not been established. Current practice is to give Td boosters every ten years, but giving them every 15 to 30 years is probably adequate in a person who completed a primary series in childhood. The ten year interval is recommended for international travelers.

Hepatitis A Vaccine

Recommended for all high-risk adults (persons living in and traveling to endemic areas, homosexual men, IV drug users, military personnel, and certain hospital and laboratory workers).

Varicella Vaccine

Recommended for healthy adults with no history of previous infection with varicella or previous vaccination. The vaccine is to be given in two doses, four to eight weeks apart. Serologic testing may be offered to patients with no history of infection.

Rubella

All women of childbearing age should be screened for rubella susceptibility by history of vaccination or by serology.

Comparing non-diabetics to type 2 diabetics, how much more likely are the type 2 diabetics to develop coronary heart disease?

A.Two to fourfold
B.Four to sixfold
C.More than sixfold
D.None of the above

A

Type 2 diabetes is associated with a two- to fourfold excess risk of coronary heart disease (CHD). It is not clear, however, how poor glycemic control affects macrovascular disease in those with type 2 diabetes. The finding of increased cardiovascular risk factors before the onset of type 2 diabetes suggests that aggressive screening for diabetes combined with improved glycemic control alone will not be likely to completely eliminate excess risk of CHD in type 2 diabetic patients.

After prolonged artificial feeding, dementia, dermatitis, and hypercholesterolemia may occur as a result of a deficiency of which mineral?

a. Copper
b. Chromium
c. Manganese
d. Zinc
e. Selenium

D

cecil p.1175

deficiency

chromium: hyperglycemia, elevated plasma FFA, neuropathy, encephalopathy

copper: depigmentation of skin and hair, neurologic disturbances, leukopenia, anemia, skeletal abnormalities

manganese: hypocholesterolemia, weight loss, dermatitis, hair and nail changes, impaired synthesis of vitamin k-dependent proteins

selenium: myalgias and cardiomyopathies

A 22-year-old college student with no prior medical problems begins working as a laboratory technician. He subsequently presents because of several recent episodes of shortness of breath, cough, fever, chills, and malaise. Each episode has lasted several days. The patient is seen during the recovery phase of an episode of this type; findings at physical examination are normal. Chest x-ray reveals several ill-defined, diffuse, patchy infiltrates. The laboratory evaluation is positive only for an increased erythrocyte sedimentation rate. Pulmonary function studies display reduced lung volumes.

On further questioning, it is learned that these episodes begin on days when the patient is required to tend to experiments involving laboratory rats at the animal facility. What is the best treatment for this condition?

A Inhaled cromolyn sodium

B Prednisone

C Inhaled beclomethasone

D Discontinuation of visits to the animal facility

E No treatment

D

dyspnea and nonproductive cough, after allergen exposure
x-ray,pft result is fit.
tx.- eliminating or preventing exposure to the offending agent is primary priority
if not possible, then corticosteroid high dose and then tapering

A 64-year-old man presents with progressive shortness of breath. Other than a history of heavy tobacco abuse, the patient has a benign past medical history. Breath sounds are absent two-thirds of the way up on the left side of the chest. Percussion of the left chest reveals less resonance than normal. While you place your hand on the left side of the chest and have the patient say "ninety-nine," no tingling is appreciated in the hand. The trachea appears to be deviated toward the left. Which of the following diagnoses is most likely?

A Bacterial pneumonia
B Viral pneumonia
C Bronchial obstruction
D Pleural effusion
E Pneumothorax

The answer is C

In evaluating a patient with shortness of breath, examination of the thorax is crucial. Tracheal deviation to the left indicates either a pleural effusion on the right or loss of volume on the left. Volume loss typically is due to an obstructed bronchus that produces atelectasis in the affected segment or lobe. Loss of aerated lung will be reflected in dullness to percussion, absent breath sounds on auscultation, and a decrease in tactile fremitus. A consolidative process such as bacterial pneumonia may well produce increased fremitus as well as bronchial breath sounds and whispered pectoriloquy, since sounds are well transmitted through a consolidated area. In a pneumothorax, a percussion of the chest would reveal hyperresonance, although breath sounds and fremitus would be absent. A possible cause of obstruction and atelectasis of a large amount of left lung tissue could be obstruction of a major bronchus by carcinoma of the lung, especially in an older patient who is a heavy smoker

tracheal deviation
percussion-dullness
fremitus decreased
absent breath sound over affected area

An 80-year-old woman falls in the kitchen, striking her head against a counter. She does not lose consciousness. Over a period of several days, she becomes progressively lethargic. Her family discovers one morning that she is difficult to arouse and that she has left hemiparesis.
All of the following statements concerning this patient are true except:

a. Differential diagnosis includes ischemic stroke with edema or brain tumor.
b. Treatment with corticosteroids is adequate.
c. The patient's CT scan might show a subdural collection with both acute and chronic blood.
d. This disorder can be treated with surgical drainage.
e. This disorder is not uncommon in ethanol abusers and patients with chronic renal failure.

B

b. Subdural hematoma (SDH) results from injury to the bridging and emissary veins as they cross the subdural space. Minor trauma can cause sufficient movement of the elderly atrophic brain to tear these vessels. Hemorrhaging can be acute or chronic. The differential diagnosis of this patient is defined by those entities that could produce a fairly rapidly progressive mass effect with the resulting increase in intracranial pressure and decrease in the level of consciousness as well as hemiparesis. This would include a stroke with progressive edema or brain tumor. Subdural hematoma can cause prominent CT scan changes as described above. When symptoms such as decreased level of consciousness, dementia, or hemiparesis occur, surgical drainage either via a burr hole or craniotomy is the treatment of choice. Smaller subdural hematomas without severe symptoms can be followed radiologically. Steroids have not been shown to affect the outcome. Ethanol abusers, people with chronic renal failure with platelet dysfunction, and the elderly are at risk to develop subdural hematoma.

HIV encephalopathy is characterized by all of the following signs and symptoms except

a. Difficulties with concentration and memory
b. Psychomotor retardation
c. Symptoms of motor dysfunction such as hyperreflexia and gait abnormalities
d. Delirium
e. Abnormal CSF examination

The correct answer is e.
e. HIV encephalopathy is a subacute encephalitis that results in a progressive subcortical dementia without focal neurologic signs. Patients usually develop subtle mood and personality changes, memory deficits, impaired concentration, and some psychomotor slowing. Patients can develop delirium, hyperreflexia, spastic or ataxic gait, paraparesis, and increased muscle tone. The neuropathologic picture includes multinucleated giant cells, microglial nodules, diffuse astrocytosis, perivascular lymphocyte cuffing, cortical atrophy, and white matter vacuolation and demyelination. Examination of the CSF may show slight elevations in protein concentrations; about 25% of all HIV-infected patients may show a mononuclear pleocytosis but it is not diagnostic of HIV encephalopathy. The correct answer is e.
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ADC-main features include-
Progressive symptoms may include mental slowing, forgetfulness,poor concentration, apathy, social withdrawal, loss of spontaneity, and reduced libido. Patients display personality changes, including
reduced emotional expression, increased irritability, mania, and disinhibition. Loss of fine motor control (deterioration in handwriting),slowing of gait, unsteadiness, urinary incontinence, and tremor may
be seen. Seizures occur in 10% of patients.
It's a diagnosis by exclusion.

mild form= impaired concentration and attention, slowness in performing complex mental tasks
more severe- cognitive dysfunction worsen, motor dysfunction with gait difficulty
personality change, hyperactivity and agitation
most severe-global dementia, paraplegia, virtual mutism

even asx. HIV infected individuals exhibit mild CSF changes

The single most important factor in the risk for adverse drug reaction is

a. Patient's age
b. Coadministration of multiple medications
c. Renal drug clearance or hepatic drug clearance
d. Bioavailability

B

c. The coadministration of multiple medications is the single most important factor in the risk of adverse drug effect; thus the fewest number of drugs possible should be used in patients

Which of the following statements regarding advance directives for health care is most appropriate?

a. Advance directives are irrevocable once executed.
b. Advance directives cannot be modified once executed.
c. Advance directives are in effect once executed.
d. Once executed, advance directives remain valid until revoked or suspended.
e. Advance directives are mandatory for admission to a health care facility

D

d. Advance directives, once executed, remain valid until revoked or suspended but do not become effective until the patient has lost decision-making capacity. Advance directives may be modified, revoked, suspended, and reinstituted. They are not required for admission to a health care facility or for obtaining insurance.

All of the following statements regarding the withholding or withdrawing of life-sustaining treatments are true except:

a. The primary basis for withholding or withdrawing life-sustaining treatments is patient autonomy.
b. There is an ethical difference between withholding and withdrawing life support.
c. Life-sustaining therapy can be limited on the basis of medical futility even without the patient's consent.
d. In the absence of an advance directive, decisions regarding life-sustaining therapy should be guided by the degree to which a patient is benefited or burdened by the treatment.
e. Pain and suffering caused by withholding or withdrawing life-sustaining treatment should be alleviated by appropriate medication even if this hastens the patient's death.

The correct answer is b.
b. There is no ethical difference between the withholding or withdrawing of any medical therapy. An

appropriately informed adult patient with decision-making capacity has the right to forgo any form of medical therapy, including life-sustaining therapy. This right is based on the ethical principle of autonomy or self-determination. A patient's physician has the responsibility to carry out the patient's request regarding the withdrawing or withholding of therapy in a humane and compassionate manner. The patient's pain and suffering, which includes dyspnea, should be relieved by the administration of appropriate medications, including sedatives and analgesics. Efficient medication to relieve pain or suffering should be given even if this hastens the patient's death. An example is titrating morphine to higher levels in order to relieve pain from cancer, severe dyspnea from lung cancer, or chronic obstructive pulmonary disease.

In circumstances in which a patient does not have an advance directive or is unable to state his or her desire and there is no surrogate decision, the physician's decision should be to determine what is best for the patient with regard to life-sustaining therapy. The benefits for the patient should be weighed against the burden. Based on the ethical principles of beneficence and nonmaleficence, if the benefits of therapy exceed the burden, therapy should be administered. However, if the burden exceeds the benefits, therapy should not be administered. The purpose of life-sustaining therapy should be to restore or maintain the patient's well-being and not merely to prolong life. Therefore, life-sustaining therapy may be withdrawn from a patient without consent, if the therapy is judged to be futile. Futile therapy prolongs the dying process without any apparent benefit to the patient

a young female with low grade fever and mild tenderness in the lower pelvis b/l came to your office after physical exam you thinks of PID..

do you treat as outpatient or you admit the patient

if you treat as outpatient what ATBs you give and for how long???

in my case, i am gonna treat her as a inpatient...

because of the high rate of ambulatory treatment failures and the seriousness of sequelae, patient are now usually hospitalized for treatment of PID.
broad spectrum cephalosporin and doxicycline
cefoxitin 2 g IV q6hours or cefotetan 2g IV every 12hours (until patient is asymptomatic for 48 hours) with concomitant 10-14days doxycycline 100mg po BID
as outpatient, ceftriaxone 500mg IM everyday or cefoxitin 2g IM plus 1g of probenecid po is used with close follow-up for resolution of symptoms

Therre are some efinite indications for admission including teen patient/pregnant/excesive nausea/failure of PO therapy etc.
Standard regime includes-
Ofloxacin+ Flagyl for 14 days (Outpatient regime)
Cefotetan IV + Doxy IV- switch to PO regime later for inpatient therapy.
These are the CDC regimes

Here are some CCS suggestions from another site to work out-

1) 2 day old with Hyperbilirubinemia(total 12...< 5mg/dl raise per day...direct...1mg/dL...)

2) NidDM out of control.

3) Narcotic overdose

4) Female with fatigue....Colon Ca/hypothyroidism

5) Biochemist with Fatigue..wtih Hypercalcemia...Renal Cell Ca

6) #0 yr Female with Major Depressive Episode

7) 7 months infant with Forewign body aspiration.

8)Hyper tensive(cholest/DM/TOB with s/o weakness?

9) Nortriptyline toxicity

10) Ecclampsia in labor

11) heart failure with HTN

12) premature labor

13) Uncontrolled Hyper tension.

14) Unstable angina

15) Diverticulitis 60 yr old LIQ pain

16) perforation DU ulcer

17) Anemia Iron deficiency in all forms

18) Afro-American with G6PD def with sulfa ingestion

19) Post viral dilated cardiomyopathy

20) NIDDM with DKA

21) Pneumococcal Pneumonia

22) Acute Cysititis...30 yr lady

23) Irrtiable bowel syndrome

24) Hashimoto thyroditis....

25) Graves Disease(hyperthyroidism)

26) 45 yr Male, cough 3 day febrile tachycardia crackles base lung right

27) simialr lady....but crackles left lung

28) male 75 yrs, cough dry SOB mild confusion, 3 days ...NIDDM mild renaldisease...CHF...afebrile...130 HR...BP normal...crackles both lung bases

29)Male 54 yr...asthma status.

30) Classical basedow disease. ...female

31) AMI unrelieved ny NTG

32) young male with Bloody diarhhea

33) 8yr child with fever...rales...pneumococaal pneumonia

34) Male...auto accident...SOB,creps,chest pain,ecchymoses.....Hemopericardium

35) Foreign body aspiration...child

POTENTIAL CCS TOPICS- another list

CVS
Aortic aneurysm,
dissecting
heart failure
Hypertension
Crisis
Office management
ischemic heart disease
Angina
unstable
Myocardial infarction

Endocrine
Diabetes mellitus,
resistant to therapy
DKA
Thyroiditis
Hashimotos
Hyperthyroidism

GastroIntestinal
Appendicitis
acute
Cholecystitis, acute
Diverticulitis, acute

Intestinal obstruction
Acute
Pancreatitis
acute
Polyp
Adenocarcinoid colonic polyp in 60 year old
Sigmoid colon
Carcinoma

Health Maintenance
Middle aged man

Hematological
Anemia
Iron deficiency
pediatric
hemophilia a
Hodgkins disease
ITP

Hepatobiliary
Cholecystitis
Acute
Cirrhosis, hepatic
GERD
Hepatitis
A
Jaundice
newborn
PUD
Ulcerative collitis

ID
AIDS
Newly diagnosed HIV pt w/u:

HIV (Oppurtunistic infections)
HIV Pneumocystis Carinii Pneumonia in an AIDS pt
HIV Pneumocystis Carni Pneumonia, Candida vaginitis, thrush
HIV related Pneumonia-ER
HIV with fungal lung infection
HIV with PCP
disseminated fungal infection
neutropenia
chemotherapy induced
Pulmonary TB

UTI
Elderly
Male, ambulatory, middle aged
Ppregnancy and UTI
vaginitis
gonococcal
trichonomas

Immune Complex
Rheumatoid arthritis

Neurology
Alzheimers
Coma
Hyperosmolar
CVA
Subdural hematoma
TIA (resolved)

ObGyn
Adenomyosis
Cervical carcinoma

Dysfunctional uterine bleeding

Eclampsia
Endometrial carcinoma
menopause
menorrhagia
in pubertal girl
Ovarian Cyst
Ovarian malignancy with metastases
uterine bleeding in a 14 y.o.
Vaginal bleeding
vaginal spotting
CIN II young women with post coital spotting after work up HPV -ve
general
post coital

Opthalmology
Glaucoma

Poisoning
Alcohol intoxication
Amitryptiline toxicity
Barbiturate
Nortryptiline toxicity
Salicyclate
Unknown
Valium

Psychiatry
Altered mental status
Dementia
Depression
Elderly
Major

Pulmonary
Asthma

Status asthmaticus in 4 year old
Interstitial pneumonitis
Pneumothorax

UroGenital
Renal failure
Urinary obstruction
BPH and dribbling
Elderly with prostate Ca

Rheumatology
Polymyalgia Rheumatica
SLE

Trauma
ARDS from trauma and multiple fat emboli
Blunt chest injury
GI perforation
Myoglobinuria
Pericardial tamponade s/p MVA (hemopericardium)
Scrotal hematoma
Splenic rupture
Spousal Abuse

How about these fellas?

What is the single most important prognostic factor for survival in patients with vulvar squamous cell carcinomas?

A.tumor size
B.depth of invasion
C.tumor grade
D.Inguinal lymph node status

D

Inguinal lymph node status is the single most important prognostic factor in patients with squamous cell carcinomas. A study of 588 patients treated in two Gynecologic Oncology Group (GOG) trials reported a 5-year survival of 91% in those with negative inguinal lymph nodes. Five-year survival decreased to 75%, 36%, 24%, and 0% in patients with one or two, three or four, five or six, or seven or more positive lymph nodes, respectively. Patients with bilateral lymph node involvement had a survival rate of 25%, compared to 71% for those with unilateral lymph node involvement.
Other major prognostic factors include tumor size, depth of invasion, tumor grade, the presence of lymph-vascular space invasion, and extracapsular growth of lymph node metastases in the groin. These features correlate with one another, and are predictive of lymph node metastasis.

Which of the following risk factors found in pregnant women with chronic hypertension is associated with adverse neonatal outcomes independent of the development of preeclampsia:

A.smoking history
B.proteinuria

C.advanced maternal age
D.black race

B

Proteinuria, detected early in pregnancy, is an independent risk factor for adverse neonatal outcomes, independent of the development of preeclampsia in women with chronic hypertension. Preeclampsia was defined as proteinuria (urinary protein excretion of greater than or equal to 300mg per 24 hours) in women without proteinuria at baseline.

What is the standard treatment for HIV-infected pregnant women?

A.There is no standard treatment for HIV-infected pregnant women
B.combination therapy with zidovudine and lamivudine
C.Zidovudine monotherapy
D.Nevirapine
E.Zalcitabine with Didanosine

A

There is no standard treatment for HIV-infected pregnant women. Many decisions about HIV therapy will be predicated on the stage of HIV disease in the mother. HIV-infected pregnant women should be offered a range of antiretroviral therapy options with discussion of the risks, both known and unknown, of exposing the baby in utero to the medications, particularly in the first trimester, balanced against the benefits of therapy to control HIV

infection and improve immunologic status. If possible, pregnant women infected with HIV should be enrolled in clinical trials to ensure that all aspects of therapy and toxicities are carefully documented. Drug exposure should be reported to national pregnancy registries.

Source: Shah SS, McGowan JP.: Preventing HIV Transmission During Pregnancy. Infect Med. 2001;18:94-105.

References

1.US Public Health Service Perinatal HIV Guidelines Working Group. US Public Health Service Task Force recommendations for the use of antiretroviral drugs in pregnant women infected with HIV-1 for maternal health and for reducing perinatal HIV-1 transmission in the United States, 2000. Available at: http://hivatis.org/guidelines/perinatal/PerinatalFeb2500.pdf.

All the following statements regarding the treatment of patients with HIV infection are true EXCEPT

A use of zidovudine (ZDV) therapy during pregnancy reduces the risk of vertical transmission to less than 10 percent

B HIV RNA assays should not be relied upon in making decisions about changing a patient's antiviral regimen

C though a useful agent in antiviral therapy, zidovudine monotherapy is a suboptimal regimen

D primary prophylaxis of Mycobacterium avium complex has clearly demonstrated efficacy in preventing bacteremia and improving survival

E breast feeding is a potential mode of HIV transmission and should be discouraged in women who are HIV-infected

The answer is B

AIDS Clinical Trial Group 076 demonstrated that ZDV (AZT) administration to women reduced the rate of HIV transmission in neonates from 25 percent in the placebo group to 8 percent in ZDV recipients. Postnatal transmission of HIV from mother to infant via breast feeding has been clearly documented. A meta-analysis of several prospective trials indicated a risk of 7 to 22 percent. Certainly, in developed countries, breast feeding by an infected mother should be avoided. There is, however, disagreement regarding this recommendation in developing countries where breast milk is the only source of adequate nutrition for the infant. Plasma HIV RNA assays provide precise and compelling data on the relative magnitude and durability of antiretroviral therapy. Most authorities recommend the use of HIV RNA assays (viral load) and CD4+ counts to guide decisions regarding antiretroviral therapy. While zidovudine has proven benefit in patients with <500 CD4+ lymphocytes, its use as monotherapy is suboptimal and should be reevaluated in any patient receiving it. Rifabutin and macrolides have both demonstrated marked efficacy in the primary prophylaxis against Mycobacterium avium with a concomitant decrease in bacteremia and improvement in survival

Which drug is usually effective for treating lithium-induced tremor?

a. Benztropine
b. Triazolam
c. Propranolol
d. Verapamil
e. Valproic acid

The correct answer is c.

c. Lithium-induced postural tremor is probably the most common of the medication-induced postural tremors. Propranolol in the range of 20 to 160 mg daily, given in two or three divided doses, is generally effective for

treating lithium-induced postural tremor. (Kaplan and Sadock's Synopsis of Psychiatry: Behavioral Sciences Clinical Psychiatry)

It's similar to essential tremor-an accentuation. Cogentin is more suitable for DRA-induced tremor(alongwith Clonazepam)

Tremor, as such is a common complication of lithium therapy and it's appearance doesn't mandate discontinuation. It is a sign of toxicity- does not correlate with serum level.
You can continue lithium with Inderal cover.

The most commonly recommended screening interval for cholesterol for adults under age 65 with no history of cardiac disease is

a. Yearly
b. Every 3 years
c. Every 5 years
d. Every 7 years
e. Every 10 years

C

In adults under age 65 with no cardiovascular disease, it is recommended that a serum cholesterol be done every 5 years. If the level is greater than 200 mg/dL, a complete fasting lipid profile should be ordered

In pt with >2 risk factors and total Ch>200, or <2 RF, total Ch>239, you do fsting lipoprotien analysis. If pt has <2 RF and is 200-239, recheck in 1-2 years.
Hope this help.

Starts from 35 in male/45 in female- after 75 discontinue routine screen.
May start earlier in case of premature Family H/O

The number of community elderly people over age 65 who experience a fall is

a. 33%
b. 55%
c. 90%

The correct answer is a.
a. About one-third of community elderly people older than 65 years of age fall each year; this percentage increases to 50% by age 80 years. Most fallers experience multiple episodes. Although the results have been inconsistent, most studies have shown that the frequency of falling is similar in older men and women. Women, however, are about twice as likely to suffer a serious injury during a fall

What is the appropriate indication for influenza vaccine?

a. Adults over age 65 or those with chronic cardiac or pulmonary disease
b. All adults if not previously immunized within the past 10 years
c. Adults with sickle cell disease or splenic dysfunction
d. Staff and patients in dialysis unit

A

. Influenza vaccine is recommended for people over age 65 who have chronic cardiac or pulmonary disease as well as for younger patients with asthma

Which of the following conditions is not associated with smoking?

a. Peripheral vascular disease
b. Parkinson's disease
c. Complications of pregnancy

d. Cancer of the larynx

e. All of the above

The correct answer is b.

b. Peripheral vascular disease, complications of pregnancy, and cancer of the larynx are all associated with smoking. Other diseases related to smoking include coronary artery disease, cerebrovascular disease, lung, esophageal, oral, and bladder cancers, and chronic obstructive pulmonary disease. Parkinson's disease is not associated with smoking but may be inversely related to it

Which condition is predictive of cardiovascular events?

a. Hospitalization

b. Systolic hypertension

c. Diastolic hypertension

d. Antihypertensive medications

e. Normal-pressure hydrocephalus

B

Although the clinical treatment of hypertension has classically focused more on diastolic blood pressure levels, epidemiologic data indicates that for middle age and elderly adults, systolic blood pressure is more predictive of future cardiovascular disease than diastolic blood pressure. Elevation of systolic blood pressure continues to be the single strongest cardiovascular risk factor, but elevation of diastolic blood pressure is diminished substantially in terms of associated risk.

Systolic BP is a sensitive indicator of CVA/Adverse cardiovascular events, more than diastolic(particularly in gero population). However hospitalization is also an independent risk factor.

A 24-year-old, previously healthy woman presents with jaundice, confusion, and fever. Initial physical examination is unremarkable except for scattered petechiae on the lower extremities, scleral icterus, and disorientation on mental status examination. Laboratory examination discloses the following: hematocrit, 27 percent; white cell count, 12,000/L; platelet count, 10,000/L; bilirubin, 85 mol/L (5 mg/dL); direct bilirubin, 10 mol/L (0.6 mg/dL); urea nitrogen, 21 mmol/L (60 mg/dL); creatinine, 400 mol/L (4.5 mg/dL). Red blood cell smear discloses fragmented red blood cells and nucleated red blood cells. Prothrombin, thrombin, and partial thromboplastin times are all normal.
The most effective and appropriate therapeutic maneuver is likely to be

A plasmapheresis
B administration of aspirin
C administration of high-dose glucocorticoids
D administration of high-dose glucocorticoids plus cyclophosphamide
E splenectomy

A

she shows the pentad of TTP(thrombocytopenia, fever ,confusion, MAHA, renal dysfunction)

plasmapheresis is the mainstay of therapy.at least 5days or for 2days after normalization of platelet count, resolution of neurologic signs
we can add methylprednisone 200mg IV qd.
antiplatelet agent (aspirin 325mg qd) in some cases
splenectomy- recurrent , refractory to plasma exchange

Which of the following statements best describes the role of polymerase chain reaction (PCR) in the diagnosis of HIV infection?

A It should be used if the western blot is indeterminate
B It is a useful screening test
C It should be used if two consecutive serologic tests (ELISA) are positive
D It should be used if the initial serologic test is positive, but the second is negative
E It has no real role

The answer is A

The standard serologic test for HIV infection, the enzyme-linked immunosorbent assay (ELISA), has a sensitivity of over 99.5 percent. However, this test is not particularly specific in that low-risk patients are subject to a false-positive rate of over 10 percent. If the ELISA test is indeterminate or positive, the test should be repeated. If the repeat is positive or indeterminate, one should proceed to the next step, which is a western blot test. If the repeat ELISA is negative, then the person can be assumed not to have HIV infection. A western blot test involves the reaction of the serum with a strip impregnated with HIV-1 antigens. Binding of antibodies in the patient's serum to the antigens on the strip is detected with an enzyme-conjugated anti-human antibody. A positive western blot test requires the detection of antibodies to several HIV-1 gene products. If the western blot is indeterminate, perhaps due to infection in evolution or due to cross-reacting antibodies in the patient's serum, one should proceed to a PCR test and repeat the western blot in 1 month. If the PCR is negative and there is no progression on the western blot, the diagnosis of HIV infection is ruled out. The PCR test is extraordinarily sensitive, but the false-positive rate would be too high for use as a cost-efficient screening test. A DNA PCR test for HIV involves the isolation of DNA from blood mononuclear cells and incubation with primers from both the gag and LTR regions, followed by amplification and hybridization to detect HIV proviral DNA. An RNA PCR test can be used to monitor the level of HIV genome present in plasma.

DNA PCR estimates viral load and is an indicator of HAART response-should be zero within 4-6 months of therapy. Ultrasensitive tests are also there but only the PCR is FDA approved for F/U

All of the following statements regarding the epidemiology of HIV infection are correct EXCEPT

A the risk of transmission following skin puncture from a needle contaminated with blood from an HIV-infected patient is less than 0.5 percent

B most cases of AIDS are now among IV drug users

C the risk of transmission from a single donor unit of blood is approximately 1/500,000

D most pediatric cases of AIDS arise because of vertical transmission from an infected mother

E there is no convincing evidence that saliva can transmit HIV

The answer is B
Among U.S. cases of AIDS, male-to-male sexual contact represents the most frequently reported mode of HIV transmission among persons with AIDS. However, over the past few years, the number of newly reported cases of AIDS among other groups, including IV drug users and heterosexuals, from certain large cities have surpassed the number of newly reported cases among men who had sex with men. The proportion of new cases attributed to IV drug use and heterosexual sex has increased dramatically over the past ten years. There is a small but existent occupational risk of HIV transmission. Large, multi-institutional studies have indicated the risk of a penetrating injury, such as a needlestick from an HIV-infected person, to be approximately 0.3 percent. Risk posed by a mucocutaneous exposure is probably closer to 0.1 percent. Current measures used to screen donors now include p24 antigen testing which has resulted in a further decrease in the risk of being infected from a unit of blood to at most 1 in 450,000 to 1 in 660,000. Pediatric AIDS arises mainly from infants born to mothers who are HIV-infected. The remainder are generally exposed via blood transfusions. Although HIV can be rarely isolated from saliva, there is no convincing evidence that saliva can transmit HIV infection, either through kissing or other exposures, such as occupationally to health care workers.

NAT (genomic amplification testing) is also used by big centers, I think it is not yet FDA approved. It shortens the window period by 11 days.
Ref J.B. Henry: Clinical Diagnosis and Management by Laboratory Methods, 20th edition

Which is a risk factor for oral cancer?

a. Radiation to head and neck
b. Alcohol and tobacco abuse
c. Fair skin and sun exposure

B

most important predisposing risk factors for the primary head and neck ca. is the use of alcohol and tobacco, the use of the two together is more than additive in enhancing carcinogenesis
other associated etiologic agents include viruses.(HPV 6,11,16,18), EBV, HIV genetic susceptibility...

Which legal document most correctly defines an advanced directive?

a. Living will
b. Durable power of attorney for health care
c. Both
d. Neither

C

Advance directives are written documents intended to become effective when the patient has lost decision-making capacity. There are three forms of advance directives. The living will specifies medical treatment preference and the medical conditions in which those preferences should or should not be implemented. With the durable power of attorney a person is designated to act as a health care representative with the legal authority to make health care decisions for the patient. However, the decisions are not specified by the document. The third form of advance directive is a combination of the above two forms. A representative is designated with the responsibility to assure that the patient's written instructions concerning medical therapy are respected

A 44-year-old nonsmoking woman presents to your office with a productive cough. She has had asthma since childhood, with several exacerbations requiring hospitalization over the past 10 years. She comes to you for treatment of poorly controlled asthma. She complains of daily productive cough, frequently expectorating brown mucus plugs, and with dyspnea, wheezing, fever, and chills. She currently is on an albuterol inhaler, inhaled beclomethasone, theophylline, and occasional short courses of prednisone for exacerbations. She denies allergies, pets, or travel. She denies postnasal drip, heartburn, and chest pain.
Physical examination reveals a woman in no respiratory distress. Head and neck examination is normal. Lung examination reveals diffuse inspiratory and expiratory wheezing with crackles in the right upper lung field. A chest radiograph reveals a right-upper-lobe infiltrate with subsegmental atelectasis and central bronchiectasis. A room air ABG shows pH 7.45, pCO2 35 mmHg, and pO2 80 mmHg. Hematocrit is 40%, leukocyte count is 15,000 mm3, segmented neutrophils 60%, lymphocytes 20%, and eosinophils 15%. Serum IgE level is 3500. Sputum analysis reveals hyphae consistent with aspergillus. A skin test for aspergillus reveals an immediate wheal and flare response.
The most likely diagnosis of this patient is allergic bronchopulmonary aspergillosis.
Which of the following is the most appropriate therapy for this patient?

a. Itraconazole
b. Amphotericin B
c. Prednisone

d. Surgical resection

e. No specific therapy is required

C

ABPA- allergen avoidance and intermittent use of corticosteroids

Pulmonary aspergilloma-observation and surgical resection for the patients with massive hemoptysis

Invasive aspergilloma- serious invasion:amphotericin B(1mg/kg/day for 2.0-2.5g total)

mild to moderate invasion-Itraconazole(600mg po qd for 4days, then 200-400mg po qd for 1 year)

Which of the following patients should undergo operative excision of an abdominal aortic aneurysm and replacement with a vascular graft?

A: A 58-year-old man with a 8-cm abdominal aneurysm who sustained a myocardial infarction 3 months ago

B: A 65-year-old man with a 7-cm aneurysm who sustained a myocardial infarction 1 year ago

C: A 65- year- old woman with a 4-cm aneurysm and no prior history of heart or lung disease

D: A 58-year-old man with a 7-cm aneurysm and FEV1 of 0.8 L

E: A 67- year- old man with an 8-cm aneurysm and creatinine 3.2 mg/dL

The answer is B

The vast majority of aortic aneurysms are due to atherosclerosis; 75 percent of such aneurysms are located in the distal aorta below the renal arteries. Although these aneurysms are typically asymptomatic, rupture may occur with devastating consequences. The prognosis is related to the size of the aneurysm as well as the presence of coexistent vascular diseases. Patients with aneurysms exceeding 6 cm who are not treated surgically have 50 percent mortality in 1 year, while those with lesions between 4 and 6 cm have 25 percent mortality during the first year. Surgical excision and replacement with a prosthetic graft are indicated for patients with aneurysms greater than 6 cm in diameter as well as in symptomatic patients or those with rapidly enlarging aneurysms regardless of the absolute diameter. Depending on the degree of operative risk, surgery also may be recommended in those with aneurysms with diameters between 5 and 6 cm. Contraindications to elective reconstruction include myocardial infarction within the past 6 months, intractable congestive heart failure, ongoing severe angina pectoris, severe obstructive lung disease, severe chronic renal failure, history of stroke with residual neurologic deficits, and life expectancy less than 2 years. An extensive preoperative evaluation including assessment of coronary disease, renal failure, and pulmonary function studies should be carried out, and if abnormalities are found, they should be ameliorated when possible. For patients in whom the diameter of the aneurysm is less than 6 cm or in whom there is significant operative risk, serial ultrasound may be helpful in defining a group that more urgently requires surgical intervention based on expansion of 0.5 cm or more.

Is a stool ova and parasites (stool O&P) recommended in cases of acute diarrhea?

A. Yes
B. No

B

Because this laboratory evaluation isn't cost-effective in cases of acute diarrhea, it is not recommended. However, the American College of Gastroenterology Practice Parameters Guideline Committee (ACG PPGC) recommends ordering the study if there is a high suspicion of parasitic infection; if the patient hasn't been treated empirically for parasites; or if one of the following conditions exists:
• persistent diarrhea in a patient with AIDS or who is a homosexual male;
• diarrhea following travel to Russia, Nepal, or mountainous regions;
• exposure to infants attending daycare centers;
• persistent diarrhea associated with a community outbreak; or
• bloody diarrhea with negative fecal leukocyte test results.

A 77-year-old male with COPD has a non-Q wave MI. Should this patient receive a beta-blocker?

A. Yes
B. No

Yes. According to a retrospective review of 201,752 patients with myocardial infarction published in the August 20, 1998 issue of the New England Journal of Medicine, mortality was lower across every subgroup of patients treated with beta-blockade compared with untreated patients, including those with heart failure, chronic pulmonary disease, advanced age, and non-Q wave infarction.

A 25-year-old woman presents with brownish discoloration of the face. She is 6 months pregnant and reports that the areas of hyperpigmentation developed as her pregnancy progressed. What is the most likely diagnosis?

A. Solar Lentigines
B. Pityriasis versicolor
C. Café au lait Spots
D. Melanoma
E. Melasma

E

Melasma gravidarum (chloasma gravidarum). This form of melasma (chloasma), a fairly trivial cause of skin hyperpigmentation, generally presents in pregnant women as a tan or brownish discoloration on the face. These blotches often proceed as far up as the hairline and extend down to the jawline. The hyperpigmented areas of skin are typically symmetric and localized to the forehead and chin, but may also manifest on the areolae, axilae, and genitals. The condition is more prevalent among dark-skinned individuals and worsens on sun exposure. Levels of progesterone and estrogen -- both of which stimulate melanin formation -- rise during

pregnancy, implicating a role for these hormones in the etiology of this pigmented lesion. Although melasma gravidarum usually fades after delivery, it may persist for many years.

A diabetic patient well-known to you has a BP reading of 150/90mmHg at his latest office visit. What is the target BP recommended for patients with diabetes?

A. 130/80 mmHG
B. 120/80 mmHG
C. 120/90 mmHG
D. 130/90 mmHG

A

According to the guidelines for management of hypertension (JNC-VI) which were revised in November of 1997, patients with diabetes should have a BP less than 130/80mmHG.
Other revisions include an emphasis on classification; the previous terms of "mild," "moderate," and "severe" hypertension have been replaced with "Stages 1, 2, and 3." Because of its small size, Stage 4 hypertension (from JNC V) has been deleted, with Stage 3 now encompassing patients with BP readings greater than 180mmHg systolic and/or greater than 110mmHg diastolic. Prognostic implications of systolic hypertension are more important than those of diastolic hypertension.

Is testing for H pylori recommended in patients with no prior history of ulcer disease and who are not at increased risk of NSAID-induced ulcer complications?

A. Yes
B. No

B

In a patient with no history of ulcer disease and who otherwise is not at increased risk of NSAID-induced ulcer complications, testing for H pylori is not recommended at this time.

Immunocompromised children should be vaccinated against varicella?

A. yes
B. no

B

No. The American Academy of Pediatrics currently recommends that most of these children not receive the vaccine routinely. The results of administering the vaccine under research protocols show that around 40% of those with acute lymphocytic leukemia (ALL) developed a small rash consisting of vesicular lesions that often congregated around the site of injection.[1] Many of these patients needed treatment with acyclovir, and some required admission to the hospital for IV administration.
There is, however, an ongoing study in which children with ALL are receiving the vaccine. The manufacturer makes free vaccine available -- through a research protocol -- to any physician for use in patients who have ALL and who meet certain eligibility criteria.[2] This is also true for renal transplantation patients. The CDC now recommends giving the vaccine to children with HIV who are asymptomatic and have CD4+ age-specific T-lymphocyte percentage of >/= 25%.[3] However, a 2-dose regimen is recommended.

contraIx.of VZV vaccination severe immunocompromised patient , patient receiving gammaimmunoglobulin, during pregnancy, acute febrile illness , hypersensitivity to certain antibiotics(erythromycin..), poor general condition due to renovascular disease, renal disease, and liver disease

high risk group like immunocompromised with chickenpox-
acyclovir 500mg/m2/8hours)

What is the most common pattern of dyslipidemia in patients with type 2 diabetes?

A. elevated triglyceride levels and decreased HDL cholesterol
B. elevated triglyceride levels
C. elevated triglyceride levels and increased high-density lipoprotein (HDL) cholesterol
D. elevated triglyceride levels and increased HDL cholesterol levels
E. elevated triglyceride levels and increased LDL cholesterol levels

A

Dyslipidemia in patients with type 2 diabetes is most commonly manifested by elevated triglyceride levels and decreased high-density lipoprotein (HDL) cholesterol. Although the concentration of low-density lipoprotein (LDL) cholesterol is usually not significantly different from that of nondiabetic individuals, patients with type 2 diabetes typically have a higher prevalence of small denser LDL particles, which have been reported to be more atherogenic.
The American Diabetes Association defines optimal lipoprotein levels for adults with diabetes as LDL cholesterol < 100 mg/dL (2.60 mmol/L) and an HDL cholesterol > 45 mg/dL (1.15 mmol/L). The desirable level of triglycerides is < 200 mg/dL (2.30 mmol/L).

What is the definitive therapy for decompression illness in divers?

A. Hyperbaric oxygen (HBO) treatment
B. Nitrogen treatment
C. 100% oxygen at 30 FSW for 90 minutes bid
D. No definite treatment is available

A

Hyperbaric oxygen (HBO) treatment is gaining popularity as the definitive therapy for a growing number of disorders, including decompression illness, arterial gas embolism, carbon monoxide poisoning, clostridial infections, crush injuries, diabetic leg ulcers, skin graft failures, refractory osteomyelitis, thermal burns, necrotizing soft tissue infections, and osteoradionecrosis.
In the US, hyperbaric oxygen therapy for decompression sickness is guided by the Navy Treatment Tables. The prescribed treatments are very effective, especially when recompression is begun promptly. The purpose of the therapy is two-fold: to promote inert gas elimination and to help cause a decrease in bubble size. The treatment outlined by the tables also provides oxygen to the damaged tissues, treats platelet and clotting damage and allows excretion of harmful metabolites. The oxygen reduces CNS edema and provides a high oxygen gradient (2000 mm Hg) for the ischemic tissues.

Should patients with total hip arthroplasty (THA) receive antibiotic prophylaxis for dental procedures?

A. Yes
B. No

B

Perioperative antibiotics are not necessary in routine dental procedures in nonimmunocompromised patients who have total hip implants. However, they should be used in any post-THA patients undergoing extensive dental procedures involving periodontal work, extractions, and relatively high blood loss.

In a retrospective study of 3000 patients with THA over 14 years from 1982 to 1995, 52 (1.7%) late infections of THA were identified. Of those, 3 patients (6% of those infected) were found to have infections related to a dental procedure both temporally and bacteriologically.

A 55-year-old healthy white postmenopausal female presents to your office with complaints of low back pain. She takes no drugs and does not smoke. Would you recommend that she get a bone density scan?

A. Yes
B. No

Yes. Because of her gender, advancing age (she is postmenopausal and not taking estrogen), and complaints of back pain (which may be due to weakened vertebrae), this patient should be evaluated for osteoporosis. Diagnosis of osteoporosis is based on measurement of bone mineral density, which correlates with fracture risk.
The absence of risk factors, such as family history or the use of certain medications, including anticonvulsants or corticosteroids, which can promote osteoporosis, does not guarantee that this patient does not have the disease; up to 35% of all women with no documented risk factors will develop osteoporosis. And osteopenia may be present in more than half the postmenopausal women seen in a typical primary care setting. Therefore, bone mineral density testing should be considered in any patient with at least one risk factor for osteoporosis, a history of hyperthyroidism/hyperparathyroidism, a chronic disease that can cause bone loss, and in all postmenopausal women who are not taking estrogen replacement therapy. Dual energy x-ray absorptiometry is the most widely used imaging technique for measuring bone mineral density.

A 65-year-old cirrhotic male with a history of hepatitis C virus (HCV) infection presents to clinic. What is the recommended screening strategy for assessing this patient for hepatocellular carcinoma (HCC)?

A. ultrasound every six months
B. alpha-feto protein (AFP) every six months
C. ultrasound and alpha-feto protein (AFP) every three months
D. ultrasound and alpha-fetp protein (AFP) every six months.
E. No screening is recommended

Answer is C.
According to a report from the American College of Gastroenterology Annual Scientific Meeting (held October 15-20, 1999, in Phoenix, Ariz), for patients at "extremely high risk" of developing HCC, such as those with cirrhosis associated with active ethanol ingestion and HCV infection, ultrasonography and serum alpha-fetoprotein (AFP) measurements should be performed every 3 months.
HCC is the most common primary liver cancer and has a worldwide distribution. This malignancy is associated with many underlying conditions and events, including hepatitis B virus (HBV) and HCV infection (with or without cirrhosis); end-stage liver diseases due to ethanol ingestion, hemochromatosis, and alpha-1-antitrypsin deficiency; exposure to environmental toxins, such as aflatoxin; and administered medications, such as anabolic steroids.
Establishing a proper screening strategy first requires determination of who should be screened. All patients with at-risk disorders should be considered for screening. In most cases, this means screening those with cirrhosis, especially when HBV, HCV, ethanol, or alpha-1-antitrypsin deficiency are causative diseases.

Poisoning

Millions of poisoning exposures occur each year in the United States, resulting in nearly 900,000 visits to emergency departments. About 90% of poisonings happen in the home, and more than half of them involve children under age six. Many poisonings can be prevented if safety precautions are taken around the home. If a poisoning occurs, calling a poison control center can help ensure rapid, appropriate treatment.

History

The history obtained from a poisoned patient is often inaccurate or incomplete, but the following information should still be sought from any source available.

(a) Name of substance ingested.

(b) Time of exposure or ingestion.

(c) Amount ingested - this usually ends up as an estimate. It is best to have both a "maximum possible ingestion" based on the premise that the bottle, prescription, or container was completely full, as well as a "probable amount ingested" based on available information. When in doubt, base your actions on the maximum possible ingestion.

(d) A calculation of the mg dosage ingested.

(e) Interventions (i.e., Ipecac, etc.) before to presentation.

(f) Past history of poisoning, overdose, or psychiatric history.

Physical Exam

(a) Complete vital signs noting any trends.

(b) Mental status.

(c) Focused exam: pulmonary, cardiovascular, abdomen, neurological systems as well as evidence of trauma and abdominal exam, (useful in identifying toxidromes).

Diagnostic Studies

Request an electrocardiogram (ECG) for patients with an abnormal or irregular pulse or who have ingested a cardiotoxic drug. A flat plate and upright abdominal x-ray (KUB) may be helpful in identifying radiopaque substances such as heavy metals or enteric coated tablets.

Laboratory Studies

(a) Electrolytes, glucose, BUN/creatinine.

(b) Arterial blood gas (ABG).

(c) Aspirin, acetaminophen, ETOH levels.

(d) CBC.

(e) Qualitative urine or serum drug screens seldom alter treatment or immediate disposition, but may be useful for later documentation of psychiatric evaluation.

(f) Qualitative levels of specific drug toxins are useful in the following limited number of agents: acetaminophen, aspirin, ethanol, methanol, ethylene glycol, iron, digoxin, theophylline, lithium, and anticonvulsants.

Principles of treatment

Five principles of treatment should be considered in the management of every poisoned patient. They may need to occur simultaneously in some patients while in other patients some of them may be inappropriate or even dangerous and have no role.

(a) ABC's (Airway-Breathing-Circulation).

Ensuring and protecting an adequate airway and maintaining effective ventilation are paramount in managing the poisoned patient. Many agents produce sedation, leading to loss of airway protection and the risk of vomiting and aspiration. Maintaining adequate perfusion of the brain, heart, and kidneys can usually be accomplished with intravenous fluids and pressors such as dopamine. In the patient with altered mental status, the following drugs are given.

Oxygen

Narcan (naloxone) 2mg 1V push

Thiamine 100mg IV push

D50 1 AMP IV push (or check dextrostick to R/O hypoglycemia)

(b) Decontamination.

The first goal in managing the adequately resuscitated poisoned patient is minimizing further exposure to the toxin by decontamination. For dermal exposures, decontamination of the skin should be accomplished quickly by removing all contaminated clothing and washing the skin thoroughly with soap and water while protecting care providers from secondary exposure. Ocular decontamination is accomplished by copious irrigation using tap water or normal saline. Gastrointestinal decontamination may be accomplished by the following methods:

Note: The single most effective method to decontaminate the GI tract is with the use of activated charcoal.

Emesis

Syrup of ipecac has a very limited role currently because of the risk of aspiration in the patient whose mental status may decline, and because it is less effective than activated charcoal alone. It is contraindicated in caustic ingestions or in patients with an altered mental status or in the ingestion of any agent which may lead to seizures or coma. Complications include aspiration, Mallory Weiss tear, esophageal tears, and electrolyte imbalance.

Gastric Lavage

May be more effective than emesis, but is of limited use if more than an hour has passed from the ingestion. Lavage is performed using a large (36F) orogastric tube with the patient in the left lateral decubitus position. Use saline in small aliquots of 100-200cc lavage with a total of 2 liters or until the return is clear.

Adsorbent (activated charcoal)

Administration of 1 to 2 gm/kg of activated charcoal orally (PO) or via a nasogastric (NG) tube is adequate gut decontamination for the majority of patients. Activated charcoal does not bind iron, heavy metals, hydrocarbons, or alcohols well, but should be given in the event other co-ingestants are present.

Whole-bowel Irrigation.

Using Go-Lytely, 2L/hour PO or via a nasogastric tube for 5-6 hours. This may be indicated after ingestion of substances poorly bound to charcoal (iron, lithium), extended-release preparations (Theodur, calcium channel blockers), foreign bodies (button batteries), and drug packets (heroin, cocaine, condoms).

(c) Aggressive Supportive Care.

When combined with resuscitation and decontamination, aggressive supportive care to prevent and manage complication is key to the successful management of the vast majority of poisoning exposures. Therefore, early consultation and possible transfer is generally indicated due to limited resources available to most GMOs.

(d) Enhanced Elimination

Techniques for removing toxins after they have already been absorbed into the systemic circulation are seldom indicated or applicable, but at times they may be central to the management of certain toxins.

Alkaline diuresis (salicylates): alkalinize the urine to a pH of 8.0 by administering normal saline with 1-2amps of bicarbonate per liter and adequate potassium replacement.

Repeat-dose activated charcoal (theophylline, phenobarbital, carbamazepine): 0.5gm/kg PO or NG every 4 hours to produce gut dialysis and interrupt enterohepatic recirculation.

Hemodialysis (salicylates, methanol, ethylene glycol, lithium): consult with a toxicologist or nephrologist for recommendations.

(e) Specific Antidotes

Appropriately administered antidotes may prevent further complications, morbidity and mortality, but most antidotes have potential adverse effects and may not be indicated in a given patient. Seek advice when considering the use of an antidote. The following list includes some of the more useful antidotes.

(1) Acetaminophen

Mucomyst 140mg/kg 1st dose, then 70mg/kg every 4 hours for 17 additional doses.

(2) Tricyclic antidepressants

Sodium bicarbonate 1 to 2 amps IV push, then infusion of bicarbonate in D5W to keep the arterial pH 7.50.

(3) Isoniazid (INH)

Pyridoxine (vitamin B6) same amount as INH ingested if known; if unknown, give 5gm IV.

(4) Narcotics

Naloxone (Narcan) 2mg IV push (some narcotics may require larger doses or continuous infusions).

(5) Cyanide

Lilly Cyanide Antidote Kit (amyl nitrate pearls, sodium nitrite, sodium thiosulfate vials-see insert for directions).

(6) Carbon Monoxide

100 percent oxygen followed by hyperbaric oxygen.

(7) Iron

Deferoxamine 10 to 15mg/kg/hr.

(8) Beta blockers

Glucagon 1 to 5mg IV push, repeat as necessary.

(9) Anticholinegics

Physostigmine 1 to 2mg IV push - (use only for dysrhythmias with hypotension, intractable seizures, or coma with respiratory compromise; intubation should be performed first; contraindicated in TCA overdose).

(10) Insecticides/organophosphates

Atropine IV (may require large doses), followed by Pralidoxime (2- PAM)

(11) Benzodiazepines

Flumazenil (Romazicon) 0.5 to1mg increments IV, total dose rarely to exceed 3mg (do not use if coingestion of an epileptogenic drug).

(12) Oral hypoglycemics

For intractable hypoglycemia, not responsive to IV glucose, use diazoxide 300mg IVPB over 30 minutes.

(13) Calcium Channel Blockers:

Calcium chloride, 1 to 2amps (100 to 200mg) over 2 to 5 minutes. May repeat to effect, and may need continuous infusion. Consider atropine 1 to 2 mg or glucagon 3 to 10mg for A-V block or profound bradycardia. May require pressors and pacing.

(14) Cocaine

Control seizures with benzodiazepines, control hypertension with lopressor and nitroprusside. Caution: the use of beta blockade alone increases mortality due to unopposed alpha effects.

Which one of the following statements is true regarding tuberculosis testing and evaluation?

a.The CDC recommends two-step screening of new employees of long-term care facilities using a booster dose of Mantoux followed by repeat testing in 1-2 weeks

b.BCG vaccine should be considered for TB prevention in HIV-positive patients

c.A positive Mantoux test is defined as erythema greater than 10 mm in diameter at 48-72 hours, or greater

than 5 mm in patients who are HIV positive, who have recent documented TB contact, or who have radiologic evidence of old TB

d.Tuberculin testing should not be given on the same day as live virus vaccines

e.Patients who report a positive skin test many years ago but cannot recall any details should be retested and the induration measured and documented

A

Mantoux testing of high-risk patients is becoming more important with the reemergence of tuberculosis and the emergence of HIV disease. A patient who reports a positive test in the past should not be retested, as no further information would be obtained and adverse reactions could occur. TB testing can be done at the same time as live virus vaccines are given but should not be done within 4 to 6 weeks afterward due to the possibility of interference and a false reaction. A Mantoux is measured by the amount of induration only, and erythema should be ignored. BCG is contraindicated in an HIV-infected patient. The booster method is recommended for testing high-risk elderly patients and employees and residents of long-term care institutions.

Which valvular repair surgery is associated with the highest mortality ?

a. Aortic valve replacement for aortic regurg

b. aortic valve replacement for aortic stenosis

c. Mitral valve replacement

d. Patent ductus repair

e. Fracture of mitral valve leaflets for stenosis

A FREQUENT COMPLICATION OF MITRAL STENOSIS IS

a. Syncopy

b. Pulmonary embolism

c. Peripherial edema

d. systemic embolism

e.Papilledema

D right

65 years old diabetic man h/o irregular intake of oral anti diabetic medication for last two weeks came to doc for his previous glucose control.It will be best reflected by-

a)HbA1C level

b)Protein binding glycosmine level

c)FBS

d)Random blood sugar

e)Home glucometer results on last two weeks

Correct B(Glycosamine level for recent 1-2 wks glucose control)

also PBS(Protien binding glucose

A 54-year-old male presents to the emergency room (ER) with the complaint of chest pain. An electrocardiogram (ECG) reveals 2.5-mm down-sloping ST segment in the anterior leads. His past medical history includes smoking for 35 years, hypertension for which he takes hydroclorathiazide, and a father who had a myocardial infarction (MI) at age 61. His vital signs reveal a BP of 106/68, an HR of 88, and an R of 14. He is obviously anxious, but no other anomalies can be detected. While initial labs are being drawn, including a creatine phosphokinase (CPK) and a troponin level, you ask the nurse to start the "usual medications," which includes heparin, nitroglycerin, and an aspirin. The wife takes you aside and confides in you, stating the pain started during sexual relations and that her husband is taking Sildenafil (Viagra) for the past 2 months. You should immediately ask the nurse to:

a. Draw a stat Sildenafil level for possible toxicity.
b. Start lidocaine IV infusion following an initial IV bolus of 100 mg, for potential torsades de pointes. Determine the interaction between Sildenafil and hydrochlorothiazide.
c. Discontinue the nitroglycerin and start esmolol, and prepare the patient for a potential cardiac catheterization.
d. Increase the nitroglycerin dose to "override" the effects of the Sildenafil.
e. Decrease the dose of the nitroglycerin to 50% and increase the heparin by 25%.

E

The correct answer is e.
e. Originally investigated as an antianginal agent, Sildenfil has proven to be an effective treatment for erectile

dysfunction. It is a selective phosphodieterase type 5 inhibitor and blocks the degradation of cGMP. It has been implicated in approximately 150 deaths so far. The majority of those cases carried a diagnosis of coronary artery disease (CAD) and took long-acting nitroglycerin. The ACC/AHA have published an Expert Consensus Document on the Use of Sildenafil in cardiovascular patients. Those recommendations include the following:

a. Sildenafil is contraindicated in those patients with CAD taking long-acting nitroglycerin. And those patients taking the short-acting form of the drug should avoid taking Sildenafil within 24 hours of taking the nitroglycerin.

b. Those patients with congestive heart failure on diuretics with possible borderline hypovolemia should be cautioned on the effects of Sildenafil.

c. Those patients with hypertension on a complicated drug regimen should avoid Sildenfil.

d. Those patients with CAD not taking nitroglycerin should be warned about the possible dangers of hypotension following the use of Sildenafil. (Circulation 1999;99:168–177.)

A 28-year-old female flight attendant presents to the ER with a 3-week complaint of progressive dyspnea on exertion which has acutely progressed over the past several days, culminating in her seeking treatment. Her past medical history includes the following: She smoked for 5 years, she quit 3 years ago, and she recently returned from a transatlantic flight where she spent 2 days in England. She takes birth control pills and an occasional vitamin. She admits to being very weight-conscious, taking a friend's "diet pills" to maintain her current weight. On physical exam she is visibly dyspneic but not cyanotic. Her vital signs reveal a BP of 138/37, an HR of 118, and an R of 34. An III/VI systolic murmur in the aortic position along with II/VI diastolic murmur is appreciated. She has rales to 1/2 bilaterally. Her ECG shows sinus tachycardia with an increase in voltage. Her chest x-ray reveals pulmonary edema and a slightly increased cardiothoracic ratio. Your initial diagnosis and treatment include:

a. Acute MI with left ventricular dysfunction. Start aspirin, nitroglycerin, and heparin. Repeat serial ECGs to check for ST elevation; if present, then administer thrombolysis.

b. Acute pulmonary emboli. Stat V/Q scan, start heparin, consider thrombolysis if hypotension ensues.
c. Left ventricular dysfunction secondary to aortic regurgitation. Aggressive diureses, vasodilator therapy (i.e., nifedipine).
d. Atypical pneumonia with sepsis. Gram stain sputum and pan-culture, broad-spectrum antibiotics until cultures are known.
e. Left ventricular dysfunction secondary to aortic stenosis arising on a bicuspid aortic valve. Diuresis, consider beta blockade, will need surgery.

The correct answer is c.
c. This patient presents with LV (left ventricular) dysfunction, along with pulmonary edema as a result of aortic regurgitation secondary to "diet pills." An MI would be unlikely in this young female with limited risk factors. A pulmonary embolism should be considered in those patients that have a history of taking birth control pills and smoking, associated with a lengthy travel. The diagnosis can be difficult and can have a similar presentation; however, the murmur of aortic regurgitation with relative aortic stenosis would not be typical. Bicuspid aortic stenosis would also be unlikely in this age group, and the widened pulse pressure would not be seen with aortic stenosis.
Since its initial report by the New England Journal of Medicine in July 1997 of appetite suppressant induced valvulopathy, multiple controversies have arisen. The prevalence ranges from <0.1% to 38% depending on the study or report, and the association between the valvular lesion and the drug remains debatable. Because of the controversies that exist, the American College of Cardiology has presented some guidelines for all patients that have used anorectic drugs. They include a discontinuation of the drug(s), physical examination and an echocardiogram for symptoms, murmur, physical findings that suggest valvulopathy, or body habitus that does not permit adequate auscultation.

When considering the need for warfarin or aspirin in patients with nonrheumatic atrial fibrillation (NRAF) for the prevention of a primary event (emboli), which statement is true?

a. Warfarin offers no benefit in preventing a primary event in those patients over age 75.
b. In a 57-year-old hypertensive man with NRAF, the risk of a primary event while taking aspirin is over 5%.
c. In a 68-year-old woman without a history of an embolic event, hypertension, or CHF, warfarin is the drug of choice.
d. For patients over age 75, the total stroke rate (ischemic plus hemorrhagic) was similar when treated with aspirin or warfarin.
e. The combination of aspirin and warfarin has a surprisingly low intracranial bleeding rate with a very low primary event rate.

The correct answer is d.
d. Numerous trials suggesting the use of antiplatelet and/or anticoagulation agents in patients with nonrheumatic atrial fibrillation have taught several lessons. The event rate in those patients with an increased risk of an embolic event is surprisingly high. While the risk of bleeding was low, the Stroke Prevention and Atrial Fibrillation (SPAF I) study suggested that the effects of warfarin were superior to aspirin, and aspirin was superior to placebo. SPAF II was designed to answer the question of using aspirin verus warfarin. It was found that in low-risk patients, ages 75 or younger, the primary event rate was 1.3% with warfarin and 1.9% with aspirin (absolute decrease of 0.7%), while the intracranial bleed rate was also low at 0.5% versus 0.2%. In those patients over age 75, the event rates for warfarin versus aspirin were 3.6% versus 4.8%, respectively, with an associated intracranial bleed rate of 1.8% versus 0.8%, respectively. These data suggest that for those patients age 65 or younger without risk factors, aspirin alone is sufficient. In those patients who are older, ages 65 to 75, or those patients with risk factors, warfarin should be used if possible. In those patients older than age 75, the risk of primary event and the risk of intracranial bleeding needs to be individualized for each patient.

All of the following cardiac abnormalities should receive endocarditis prophylaxis for the appropriate indication except

a. Mitral valve prolapse with a regurgitation murmur
b. Hypertrophic cardiomyopathy
c. Isolated secundum atrial defect
d. Prosthetic cardiac valve
e. History of previous bacterial endocarditis

c is CORRECT.
c. Endocarditis can be a significant health problem. The best treatment for endocarditis is to prevent it. The American Medical Association along with the ACC/AHA have set guidelines concerning who should be considered for antibiotic prophylaxis and which antibiotic is recommended for treatment. Low or negligible risk lesions include isolated atrial septal defect (secundum type), mitral valve prolapse without regurgitation and relatively normal-appearing valves, pacemaker, and coronary artery disease. Those lesions that are considered intermediate to high risk include prosthetic heart valves, previous history of endocarditis, stenotic and regurgitant lesions of the aortic and mitral valve, ventricular septal defect, coarctation of the aorta, and mitral valve prolapse with a regurgitation murmur.

All of the following suggest that a wide complex tachycardia originates from above the ventricle (supraventricular tachycardia) except

a. Onset with a premature P wave
b. RSR configuration in V1
c. Atrial-ventricular (AV) dissociation
d. Slowing or terminating with an increase in vagal tone
e. RP interval 100 ms

c is CORRECT.
c. The etiology of a wide-complex tachycardia can be one of the most difficult rhythms to diagnosis in medicine. Multiple criteria have been put forth with various degrees of sensitivity in an attempt to accurately differentiate ventricular tachycardia from supraventricular tachycardia with a wide QRS complex (aberrancy). Although none of the criteria has a 100% accuracy, the presence of atrial ventricular dissociation strongly suggests that the arrhythmia originates in the ventricle, whereas the onset of the arrhythmia with a premature atrial beat, an RP interval of less than or equal to 100 ms, RSR' in V1, and slowing and/or terminating are very suggestive of a supraventricular origin (SVT).

All of the following statements concerning cardiac murmurs are true except:

a. All diastolic murmurs are pathologic.
b. Continuous murmurs always indicate organic disease.
c. Late systolic murmurs are pathologic.
d. Pansystolic murmurs are innocent in nature.
e. Grade 5–6 murmurs are rarely innocent in origin.

The correct answer is d.
d. Because auscultation is of primary importance in a cardiac examination and innocent or nonpathologic murmurs are relatively common, the physician has a great responsibility to separate the innocent from the pathologic. There is no cardiac sound in diastole, therefore, any diastolic sound needs to be further investigated. Continuous murmurs that extend through S2 reflect a continuous pressure difference between structures and, therefore, must be abnormal. Those murmurs that start late in the systolic cycle and extend to S2 are pathologic, because the volume and the velocity of blood in a normal heart is low and, therefore, typically silent. Although the loudness or grade of the murmur is a poor indicator of pathology, those murmurs associated with a thrill grade 4 and above usually have a pathologic origin. Other associated conditions to consider when confronted with a loud murmur are high cardiac output (hyperdynamic), thin chest wall, pectus excavatum, anemia, and an uncoiled aorta that is close to the chest wall. Pansystolic murmurs, as with late murmurs, are pathologic in nature because the timing close to S2 should be silent.

In patients with suspected critical aortic stenosis, the workup should include all of the following diagnostic tools except

a. ECG
b. Echocardiogram with Doppler flow evaluation
c. Exercise stress test for functional capacity
d. Chest x-ray
e. Cardiac catheterization

C

Exercise stress testing remains a contraindication in significant aortic stenosis. As the patient exercises, the cardiac output is unable to compensate for the peripheral vasodilatation, resulting in cerebral hypoperfusion and syncope.

ECG-LVH,LV strain
chest X-ray: poststenotic dilatation of ascending aorta
aortic calcification,
echo: calcificaion,LVH
pr.gradient between atrium and ventricle by doppler echo.
catheterization: pr.gradient(aorta<LV)
elevated LVEDP, large a wave in PCWP(LApr.)

even asx.patient, limit physical activity!

c-- A stress test in a c/o critical AS can lead to sudden syncope...due to sudden decrease in the CO

Characteristics that would portend a poor prognosis and an increased likelihood for severe coronary artery disease include all of the following except

a. Failure to complete stage II of a Bruce protocol
b. The onset of chest pain prior to the completion of the second stage of any of the currently available protocols
c. Postexercise ECG change (ST depression) greater than 6 minutes to recovery
d. A flat BP response of less than 130 mmHg with continued exercise (off â-blockers)
e. Greater than 2 mm ST depression in multiple leads

The correct answer is b.
b. Exercise stress testing represents the base of a cardiac workup for CAD. Although there are numerous protocols of exercise, the most widely followed is the Bruce protocol. This protocol increases the grade of incline and speed of walking at a 3-minute interval, with the intent of achieving 85% of a predicted maximal HR as determined by age. Each of the following has been associated with a poor prognosis and increased severity of CAD: failure to complete 6 minutes, a flat BP response <130 mmHg, ST depression greater than 6 minutes into recovery, or greater than 2 mm ST depression in multiple leads. Chest pain, however, without any of the above findings, has no clinical relevance to prognosis or to the extent of CAD.

Each of the following is an indication for surgical intervention in those patients who present with endocarditis except

a. Organism isolated
b. Recurrent embolism
c. Extravalvular infection
d. Aortic regurgitation
e. CHF despite medical therapy

The correct answer is d.
d. Antibiotics remain the mainstay for the treatment of endocarditis, yet occasionally surgery is required. Patients needing surgery include those with fungal isolates, extravalvular infection such as a valve ring abscess or purulent pericarditis, recurrent embolism, CHF despite medical therapy, prosthetic valve dehiscence or obstruction, and persistent bacteremia or recurrence of infection despite appropriate antibiotic therapy. Aortic regurgitation is not a primary reason for surgery if it is well-tolerated, but some patients need surgical repair when the infectious process is cleared.

what is the organism isolation?
is that fungal endocarditis or large vegetation?
Surgical Ix.
1.CHF refractory medical tx.
2.repeated embolic episode
3.myocardial abscess
4.recurrent endocarditis
5.sinus valsalva or AV junction endocarditis
6.fungal endocarditis
7.2nd degree AV block
8.large vegetation on echo.

You are asked urgently to examine a 57-year-old woman in the coronary care unit who presented to the emergency department 3 hours previously with an acute inferior wall MI. You notice that she presented to the emergency department 40 minutes after the onset of symptoms and received thrombolytic therapy shortly thereafter. She now is markedly diaphoretic and has mild tachypnea without chest pain.
Examination reveals BP 80/44, elevated JVD to 7 cm. Her precordium is quiet, and there are bibasilar rales.

Following your assessment, you note all of the following except:

a. This complication occurs in approximately one-third of inferior wall infarctions and needs no treatment.
b. Fluid challenge increases the central venous pressure.
c. Emergency surgery is the treatment of choice.
d. Balloon-tip flow-directed catheterization will help confirm the diagnosis.
e. An intraaortic balloon pump will help unload the left ventricle, which can improve hemodynamics.

The correct answer is c.
c. This patient is experiencing a right ventricular MI. Clinically, the patient will have a low cardiac index and hypotension and elevated central venous pressure (CVP) with clear lung fields. An inspiratory increase in the right atrial pressure may be seen (Kussmaul's sign). A ratio of 0.8 between the right atrial pressure and the pulmonary capillary wedge pressure obtained by a balloon-tip flow-directed catheter has been suggested to indicate a right ventricular infarction, especially when the wedge is 10 mmHg. Treatment includes fluid resuscitation (sometimes as much as 200 cc per hour of normal saline), maintenance of atrial synchrony with the ventricle, improvement of LV performance with pressers, afterload reducers, or an intraaortic balloon pump as needed. Surgery is not a treatment option for the patient with right ventricular MI.

inf.MI hx.
hypotension, elevation of the JVP

patients with a systolic 90-100mmHg and a depressed cardiac index often respond to IV fluids, which should be given until the PAOP is 15-18mmHg
excessive fluid administration should be avoided.
cardiac index still is decreased after fluid administration or if the sy.BP<90mmHg, dobutamine should be administered.
patients with severe hypotension that is refractory to dobutamine and volume resuscitation should be supported with IABP
in patients with heart block causing AV dysynchrony, AV sequential pacing may have marked benefitial hemodynamic effects.

Adrenal crisis

Adrenal crisis with hypotension must be treated immediately. Patients should be evaluated for an underlying illness that precipitated the crisis.

1. If the diagnosis of adrenal failure is known, hydrocortisone, 100 mg IV q8h, should be given, and 0.9% saline with 5% dextrose should be infused rapidly until hypotension is corrected. The dose of hydrocortisone is decreased gradually over several days as symptoms and any precipitating illness resolve, then is changed to oral maintenance therapy. Mineralocorticoid replacement is not needed until the dose of hydrocortisone is less than 100 mg/day.

2. If the diagnosis of adrenal failure has not been established, a single dose of dexamethasone , 10 mg IV, should be given, and a rapid infusion of 0.9% saline with 5% dextrose should be started. A Cortrosyn stimulation test should be performed . Dexamethasone is used because it does not interfere with subsequent measurements of cortisol. After the 30-minute plasma cortisol measurement, hydrocortisone, 50 mg IV q8h, should be given until the test result is known.

Incidental Adrenal Nodules

Adrenal nodules are a common incidental finding on abdominal imaging studies. Most incidentally discovered nodules are benign adrenocortical tumors that do not secrete excess hormone, but the differential diagnosis includes adrenal adenomas causing Cushing's syndrome or primary hyperaldosteronism, pheochromocytoma, adrenocortical carcinoma, and metastatic cancer.

I. Evaluation. The imaging characteristics of the nodule may suggest a diagnosis but are not specific enough to obviate further evaluation.

A. Patients who have potentially resectable cancer elsewhere and in whom an adrenal metastasis must be excluded may require needle biopsy of the nodule. Pheochromocytoma should be excluded with measurement of 24-hour urine catecholamines before biopsy.

B. In patients without known malignancy, the diagnostic issues are whether a syndrome of hormone excess or an adrenocortical carcinoma is present. Patients should be evaluated for symptoms suggestive of pheochromocytoma (episodic headache, palpitations, and sweating) and signs of Cushing's syndrome. Plasma potassium and dehydroepiandrosterone sulfate and 24-hour urine catecholamines should be measured, and an overnight dexamethasone suppression test or 24-hour urine cortisol should be performed.

II. Management. Patients with hypertension and hypokalemia should be evaluated for primary hyperaldosteronism in consultation with an endocrinologist. Abnormalities of cortisol secretion should be evaluated further. If clinical or biochemical evidence of a pheochromocytoma is found, the nodule should be resected after appropriate a-adrenergic blockade with phenoxybenzamine. Elevation of plasma dehydroepiandrosterone sulfate or a large nodule suggests adrenocortical carcinoma. A policy of resecting all nodules greater than 4 cm in diameter appropriately treats the great majority of adrenal carcinomas while minimizing the number of benign nodules that are removed unnecessarily. Most incidental nodules are less than 4 cm in diameter, do not produce excess hormone, and do not require therapy. At least one repeat imaging procedure 3–6 months later is recommended to ensure that the nodule is not enlarging rapidly (which would suggest an adrenal carcinoma).

A 62-year-old man with lung carcinoma has rapid progression of bilateral lower-extremity weakness to paralysis over several hours and bilateral lower-extremity hypesthesia. He loses bowel and bladder continence. His arm strength is not affected. Which of the following statements concerning this patient is true?

a. Differential diagnosis includes compressive myelopathy, Guillain–Barré syndrome, Eaton–Lambert syndrome, or paraneoplastic neuropathy.
b. MRI of the spine or myelography could be postponed.
c. Hyperreflexia and increased muscle tone are always found early in this disorder.
d. The only treatment option is with intravenous steroids.
e. The only treatment option is surgical decompression.

The correct answer is a.
a. The patient has spinal cord compression due to vertebral metastasis. Spinal cord compression in the thoracic spinal cord region will produce sensory and motor changes below the level of the lesion. Cervical involvement will involve both arms and legs. Pain is not universal and should not dissuade the clinician from making this diagnosis. Because of the possibility of recovery of function, rapid diagnosis and intervention with radiation therapy or surgery is indicated. Sometimes patients will exhibit "spinal shock" soon after development of compression and have flaccidity and hyporeflexia. Definitive diagnosis with either MRI or myelography should be made in the patient as soon as possible. Although compressive myelopathy from vertebral metastasis is the most likely diagnosis, differential diagnoses should include Guillain–Barré syndrome, Eaton–Lambert syndrome, or paraneoplastic neuropathy.

it looks like oncologic emergency
abnormal neurologic exam with back pain, lung cancer hx. even loss of sphincter control...- emergent MRI, steroid, but plain radiographs of spine when normal exam(erosion /loss of pedicle, collapse of vertebral body, paraspinous mass)
emergency tx. - high-dose steroid and RTx
when it comes to surgery(laminectomy) - refractory to RTx. progressive neurologic sign even Rtx., recurrent on the previous Rtx. site,..

Which one of the following statements about hepatitis B e antigen (HBeAg) is LEAST accurate?

A HBeAg can be detected transiently in the sera of patients ill with acute hepatitis B infection
B The presence of HBeAg in the serum is correlated with infectiousness
C The absence of HBeAg in the serum rules out chronic infection caused by the hepatitis B virus
D HBeAg is immunologically distinct from HBsAg but is genetically related to HBcAg
E The disappearance of HBeAg from the serum may be a harbinger of resolution of acute hepatitis B infection

The answer is C
Hepatitis B e antigen (HBeAg) is a protein that is associated with the HBV core particle. HBeAg is a soluble protein found only in HBsAg-positive serum and is immunologically distinct from HBsAg as well as from intact HBcAg, an antigen expressed on the hepatitis B virus nucleocapsid core. Interestingly, both HBcAg and HBeAg are encoded on the so-called C-gene of the hepatitis B genome. Owing to the close association of HBeAg and HBsAg, the presence of HBeAg in the serum is linked with infectiousness, and the antigen is present during the viremic period of acute hepatitis B. HBeAg correlates well with viral replication, and detection of HBeAg persistence predicts for the subsequent development of chronic hepatitis B infection; however, the absence of HBeAg in serum does not preclude the development of chronic hepatitis B infection. In acute hepatitis B, the disappearance of HBeAg from serum often presages resolution of the acute infection; however, HBeAg-negative persons should be considered infectious until antibody to HBsAg is no longer detected in the serum.

All the following factors portend a poor survival rate during an attack of acute pancreatitis EXCEPT

A hyperbilirubinemia
B hypoalbuminemia
C hypocalcemia
D hypoxemia
E discolored peritoneal fluid

The answer is A
Serum bilirubin elevations >68 mol/L (.4.0 mg/dL) occur in about 10 percent of patients with acute pancreatitis, are usually transient, and do not portend a poor prognosis unless they are accompanied by very high levels of serum lactic dehydrogenase

ranson criteria(poor px.)
at admission:
age>55years
leukocytosis>16,000/mm3
hyperglycemia>200mg/dl
serum LDH>400IU/L
serum AST>250IU/L
during intial 48hr
hematocrit fall>10%
fluid sequestration>4000ml
hypocalcemia<8mg/dl
hypoxemia(pO2<60mmHg)
BUN rise >5mg/dl after IV fluids

hypoalbuminemia<3.2g/dl
i think discolored peritoneal fluis is sequestration or pancreatic necrosis

Near-Drowning

Predisposing factors include youth, inability to swim, alcohol and drug use, barotrauma (in scuba diving), head and neck trauma, and loss of consciousness associated with epilepsy, diabetes, syncope, or dysrhythmias. Near-drowning is defined as survival for at least 24 hours after submersion in a liquid medium.

I. Pathophysiology. Much has been made of the differences in pathophysiology between fresh- and salt-water drownings. However, the major insults (i.e., hypoxemia and tissue hypoxia related to / mismatch, acidosis, and hypoxic brain injury with cerebral edema) are common to both. Hypothermia, pneumonia, and, rarely, DIC, acute renal failure, and hemolysis also may occur.

II. Treatment. Begin with resuscitation, focusing on airway management and ventilation with 100% oxygen. Establish an IV line with 0.9% saline or lactated Ringer's solution. The Heimlich maneuver is not indicated unless upper airway obstruction is present.

A. Immobilize the cervical spine, as trauma may be present.

B. Treat hypothermia vigorously

C. Manage pulmonary complications. Administer 100% oxygen initially, titrating thereafter by ABGs. Intubate the patient endotracheally and begin mechanical ventilation with positive end-expiratory pressure (PEEP) if the patient is apneic, is in severe respiratory distress, or has oxygen-resistant hypoxemia. Administer bronchodilators if bronchospasm is present.

D. Reserve antibiotics for documented infection. Prophylactic glucocorticoids have no role.

E. Manage metabolic acidosis with mechanical ventilation, sodium bicarbonate (if the pH is persistently <7.2), and BP support.

F. Cerebral edema may occur suddenly within the first 24 hours and is a major cause of death. Treatment of cerebral edema does not appear to increase survival ,and intracranial pressure monitoring does not appear to be effective. Nevertheless, if cerebral edema occurs, hyperventilate the patient to a PCO2 of no less than 25 mm Hg, and administer mannitol (1–2 g/kg q3–4h) or furosemide (1 mg/kg IV q4–6h). Treat seizures aggressively with phenytoin. The routine administration of glucocorticoids is not recommended. Hypothermia or barbiturate "coma" is not indicated. It may be necessary to sedate and paralyze the patient to reduce oxygen consumption and facilitate intracranial pressure management.

III. Observation. Admit patients who have survived severe episodes of near-drowning to an ICU. Noncardiogenic pulmonary edema may still develop in those individuals with less severe immersions. Admit any patient with pulmonary signs or symptoms, including cough, bronchospasm, abnormal ABGs or oxygen saturation as measured by pulse oximetry (SpO2), or abnormal chest radiograph. Observe the asymptomatic patient with a questionable or brief water immersion for 4–6 hours and discharge the patient if the chest radiograph and ABGs are normal. However, if a documented long submersion, unconsciousness, initial cyanosis or apnea, or even a brief requirement for resuscitation has occurred, the patient must be admitted for at least 24 hours.

HOW WE WIL PROCEED TO A CASE OF MI IN ORDER LIKE WHAT LABS AND WHAT MANAGEMENT?

If the patient is unstable:

INITIAL:

1. ABC, including: O2, IV saline, Monitor cardiac, oximetry and vital sign

2. Quick PE Heart/lung

3. EKG, CXR, ABGS, CK-MB and Troponin I (stat)

4. Nitroglycerin X3, asparin chewing, Morphine IM

5. Move the time to get the result of EKG and enzyme changes (MI most speciefic: troponin+EKG ST elevation)

6. t-pa, heparine, metoprolol

7. Transfer the patient to Floor or ICU

AFTER ADMISSION

1. PE: Gen, TEENT, Chest, abd, neuro

2. LAB: cbc, chem12, PT/PTT, UA, LFTs, Lipid profile, TSH, Ca and Mg level

3. Echo (transesphgeal better),Fraction ejection

4. Counsel patient

5. bedrest, liquid diet, ranitidine

6. Consult Cardiologist

BEFORE DISCHARGE:

1. Submaximal stress test (max stress test need 3-6 weks after MI)

2.Medications: Asprin, B-blocker, warfarin,if A-fib present

3. Exercise after 4 wks, sex after 4 wks and return to work after 8 weeks

4. Follow up appointment : 4wks

IMPORTANT TIPS:

1. Do not use t-pa and heparine, before you confirm is MI--EKG+Enzyme changes
(Initial order O2, Nitro, Asprine, metoprolol)

2. Inferior MI (II, III aVF ST elevation)with Low BP
avoiding Nitro, morphine and B-blocker. Giving IV fluid
if not effective-BP 90-70, giving dopamine, BP< 70 norepinepherine

3. Arrthymia control: Atropin, lidocaine or cardiac pacing

4. If CHF or cardiac shock develop: think about dobutamin, lasix, ACE inhibitor, introaortic pump and PTCA
(If you decide to do PTCA, cardiac catheter should be done first)

5. Indications for PTCA: Contrindication for t-pa, MI with shock and CHF > 24 hrs, one vessel occlusion

6. Indication for CABG: Failure medical TX, 2 or t3 vessel occlusion, patient with diabetes

Lipid profile should be done 3 months after MI as one done acutely gives falsely low readings
Dont forget to give colace for constipation which is common
ACE also on discahrge
hope it helps

50 M c/o lower back pain and right leg sciatica for
> 2 wks. On raising
> left leg to 40 degrees with left knee in extension
> causes the
> patient to complain of pain in his lower back that
> radiates to his RT
> calf. Which statement is TRUE:

> a. patient is not maingering

> b. positive st. leg raising test is more specific
> for nerve-root
> compression on the contralateral side than on the
> ipsilateral side.

> c. result is pathognomonic for sacroiliac sprain
> syndrome

> d. Cauda equina syndrome is present

> e. Needs surgical intervention to correct
> radiculopathy.

CCS- Acute Cholecystitis

- Investigations:
  > plain abdominal X-ray
  > abdominal USG

> abdominal CT
> oral cholecystogram
> MR cholangiography
> hepatobiliary scan with Tc-99m-IDA
> CBC with diff
> chem 7, serum lipase and amylase
> blood type and screen,BUN Glu, Creatinine,PT,PTT
>
> Intervention:
> 1.NPO and IVF
> 2.Reduce fat in diet
> 3.pain control-morphine
> 4.decompression of the pressure in the abdomen by a
> tube placed in
> the stomach
> 5.antibiotics to eliminate the infection
> 6.emergency cholecystectomy if perforation,
> pancreatitis or CBD
> dilatation
> 7.Percutaneous transheptic cholecystostomy

CCS is a cost effective exam
1.PT,PTT without h/o bleeding in fammily not needed
2.MRI angiogram/Hepatobillary scan? Why?
3.Pain control maperidine not morphine
4.Where is surgery consult.
5.Pancretitis and CBD -How could could be percutanous transhepatic cholesistomy?=It is for pus in billiary tree

morphine cause spasm of sphincter of oddi, so meperidine, pentazocine is desirable.
but i would order PT/PTT for preparing preop. order..
also oral cholecystogram is low cost, readily available, identification of GB anomalies, accurate identification of

gallstones, but more time-consuming than GB ultrasound..
GB ultrasound - procedure of choic for detection of stones
radioisotope scan(HIDA,DIDA,ETC) is useful in diagnosis acalculous cholecystopathy, especially if given with CCK to assess GB emptying
iam not sure usefulness of CT, PTBD or PTCD in this case....

Which one of the following drug can cause acute hepatic necrosis ?
a. INH
b. Acetominophine
c. halothane
d. methydopa
e. erythromycin

B

classification of drug-induced liver disease
zonal necrosis: acetaminophen, carbon tetrachloride
nonspecific hepatitis: aspirin,oxacillin
viral hepatitis-like reactions; halothane, INH, phenytoin, diclofenac
chronic hepatitis
-autoimmune hepatitislike: methyldopa, dantrolene
-viral hepatits lke;; INH,halothane
cholestasis: estrogen
fatty liver
-large droplet: ethanol, corticosteroid

-small droplet: tetracycline, valproic acid
tumors
- adenoma: estrogen
-angiosarcoma: vinyl chloride, arsenic, thorium dioxide

here's the info...u can decide..

Methyl dopa and INH --- chronic hepatitis.

Acetaminophen--- normally acetaminophen undergoes sulfation and glucuronidation for elimination. However, when capacity is exceeded conversion to toxic metabolite which binds to cell components.
-- centrilobular necrosis
· beware: alcoholic with P450 induction plus glutathione depletion leading to enhanced sensitivity to acetaminophen

Halothane---
severe halothane hepatitis usually develops after multiple exposures
· delay before exposure and hepatotoxicity
· liver biopsy: similar to viral hepatitis
· protein adducts formed in initial toxic reaction provide the hapten for the formation of antibodies which augments damage on re-exposure

A 54-year-old man who lost his job approximately 5 months ago complains of profound difficulty sleeping at night. He recently found a new job but has continued to experience difficulty sleeping. He notes that he falls asleep more easily while watching television early in the evening and feels sleepy outside the house. He is preoccupied with his inability to sleep at night. General physical examination and routine laboratory screening are unremarkable. He denies the use of alcohol, coffee, and other drugs. What is the most appropriate approach?

A Administration of a benzodiazepine

B Administration of stimulants

C Administration of estrogen

D Administration of tricyclic antidepressants

E No therapy

The answer is A

Chronic or long-term insomnia, by definition, lasts for months or years and usually is reflective of a psychiatric or chronic medical condition, drug use (including caffeine or alcohol), or a primary sleep disorder. Psychophysiologic insomnia is characterized by preoccupation with the inability to sleep at night. The problem often is triggered by a stressful event but may persist for long periods because of the acquisition of poor sleep habits. Patients often are aroused by their own failed efforts to sleep. They more readily sleep at unusual times or places. This patient does not have narcolepsy, since excessive daytime sleep and cataplexy are not included in his syndrome. Narcolepsy may be treated with stimulants such as methylphenidate. Moreover, he has no findings suggestive of sleep apnea syndromes, which might benefit from the use of conjugated estrogens. Instead, rigorous attention to sleep hygiene, such as making sure the bedroom is used only for sleep and removing distracting stimuli at bedtime, is most appropriate. Benzodiazepine hypnotics may be helpful during the initiation of treatment by serving to allow behavioral therapy, which is probably the most specific way to treat this problem.

A 14-year-old boy residing with his parents on a military base presents with a fever of 38.6°C (101.5°F) and complains of lower back, knee, and wrist pain. The arthritis is not localized to any one joint. He gives a history of

a severe sore throat several weeks earlier. Physical examination of the skin reveals pea-sized swellings over the elbows and wrists. He also has two serpiginous, erythematous pink areas on the anterior trunk, each about 5 cm in diameter. Laboratory investigation includes negative blood cultures, negative throat culture, normal CBC, and an erythrocyte sedimentation rate (ESR) of 100. An antistreptolysin-O (ASO) titer is elevated. At this point, appropriate therapy would consist of

A supportive care alone
B parenteral penicillin
C parenteral penicillin and glucocorticoids
D parenteral penicillin and aspirin
E parenteral penicillin, aspirin, and diazepam

D

he shows
pharyngitis hx.
major manifestation(migratory polyarthritis, erythema marginatum)
minor manifestation(fever, arthralgia, elevated ESR)
elevated ASO titer
so
penicillin and
aspirin for sx. of arthritis
steroid only for heart failure and severe carditis
digitalis and furosemide only for CHF
diazepam or haloperidol only for chorea but controversial...

Which of the following statements about Paget's disease of bone is true?

a. It involves cancellous and cortical bone.
b. It frequently undergoes malignant transformation.
c. It is a contraindication to joint replacement surgery.
d. It is rarely asymptomatic.
e. It does not affect the bone marrow.

A

a. Paget's disease of bone (osteitis deformans) is a disorder of bone formation that affects both cortical and cancellous bone. Initially there is excessive bone resorption, producing radiolucent areas. Excessive bone formation occurs later in the course, producing thickening, deformity, and trabecular disorganization. Paget's disease is most often asymptomatic; when pain occurs, it is due to secondary osteoarthritis, nerve impingement, or fracture. Osteosarcoma occurs in fewer than 1% of cases. The majority of patients who undergo joint replacement surgery, usually of the hips or knees, obtain excellent results.

The highest prevalence of latex allergy is found in individuals with which one of the following conditions?

a. Asthma
b. Spina bifida
c. Allergic rhinitis
d. Peanut allergy
e. Prosthetic heart valves

B

Today it is known that latex allergy occurs more frequently in individuals or groups who have high exposure to NRL products. Healthcare workers, children with spina-bifida, other individuals who have undergone multiple surgical or dental procedures, and persons with atopy (atopic eczema, allergic rhinitis, hay fever, asthma) are considered to be at increased risk.

Rates in children with spina bifida are alarmingly high, ranging from 34% to 67%. Rates in children with atopic dermatitis have generally varied between 2% and 4%, although one study in 1996 found that almost 21% of atopic children with hand dermatitis were sensitized to latex.

The prevalence of latex sensitization in the general population also varies. Studies show rates that range between 0.4% and 7.9%, with one recent study of 2,000 unselected blood donors revealing a sensitization rate greater than 5%.

A 27-year-old woman has a 2-year history of systemic lupus erythematosus (SLE). She originally presented with symmetrical arthritis and intermittent pleuritic chest pain.
At that time, laboratory data indicated the following: WBC count 3.5, Hb 11.6, platelet 165,000, P 85, L 10, M 5; creatinine 0.9; ANA 1/320 speckled pattern; ds DNA antibody negative, SS-A 60 (normal < 29); C3 60 (N 73–120), C4 12 (N 15–30), urinalysis negative.

She was treated with nonsteroidal antiinflammatory drugs and eventually with hydroxychloroquine for control of her arthritis. She now presents with a 1-month history of temperature of 99°F to 100°F, increased arthralgias, and anorexia. Examination shows BP 180/110, fundi benign, lungs clear, heart without gallops or murmurs, mild swelling and tenderness of her proximal interphalangeals (PIPs), and 1+ pretibial edema.

Laboratory studies show Hb 9.5, Hct 27, P 90, L 8, M 2; creatinine 2.2; ds DNA 150, C3 32, C4 <8; urinalysis 3+, protein 2+, blood 5 to 10 RBC/HPF. She undergoes renal biopsy that shows diffuse proliferative glomerulonephritis with mild interstitial fibrosis.

The most appropriate treatment regimen for this patient would be

a. Prednisone 60 mg/day for 1 month, then tapering doses
b. Prednisone 60 mg and monthly pulses of cyclophosphamide 0.75 g/m2
c. Intravenous methylprednisolone 1000 mg daily for 3 days, followed by prednisone 60 mg
d. Intravenous methylprednisolone 1000 mg daily for 3 days, followed by prednisone 60 mg daily and monthly pulses of cyclophosphamide 0.75 g/m2

D

diffuse proliferative GN and interstitial fibrosis...
a predominance of irreversible changes with little acute inflammation portrends a poor response to therapy and should modify the aggressiveness of immunosuppressive treatment.
patients with severe renal disease are treated initially with methylprednisolone 500mg IV q12hrs for 3days and then prednisone po 0.5-1mg/kg qd
prednisone should then be tapered over6-8 weeks to the lowest dosage
and then cytoxan 0.5-1g/m2 IV monthly for 6months
it has been shown to retard progressive scarring within the kidney, prevent loss of renal function, reduce the risk of ESRD....
Source)washington manual and primer on the rheumatic disease..

A 12-year-old is brought to the emergency department 20 minutes after a near-drowning episode. He required only minimal resuscitation at the swimming pool and is now alert, oriented, and in no distress.

What further action would you take?

a.Intubate the patient for bronchial suctioning
b.Admit for observation and monitoring
c.Discharge after he is observed for 30 minutes
d.Discharge if the physical examination is normal

B

Even near-drowning patients who require minimal resuscitation need advanced life support follow-up because a substantial number will have respiratory distress within 4 hours after the event. Intubation would be done only for its usual indications.

Even if there r no sings or symptoms after a near-drowning experience..the patient must be kept under observation for 24 hours due to the possibility of late development of ARDS.

A kid with clavicale fracture,after proper management,
how long the patient could do regular physical activities ?

2-4 weaks

Ilio-Tibial Band Syndrome (ITBS)

Ilio-Tibial Band Syndrome (ITBS)

Lateral knee pain in runnersis often caused by Iliotibial Band Syndrome (ITBS). The ITB is a thick band of tissue which runs from the outside of the pelvis (over the hip) down the thigh and inserts just below the knee (on the outside). The symptoms range from a stinging sensation on the outside of the knee (most common), or along the entire length of the ITB, to swelling. The pain will worsen with activity when the foot strikes the ground and overpronates (where the foot "spreads" to the floor), especially if you overstride or run downhill and may persist afterward. A single workout of excessive distance or increase in mileage can aggravate the condition.

Treating ITB should consist of the following:
Decrease mileage
Ice knee after activity
Alternate running direction on banked surface
Stretching the ITB.

Ankle Sprains

The most common type of ankle injury is a sprain. A sprain results from the stretching and tearing of small ligaments (fibrous bands connecting adjacent bones in a joint). There are many ligaments surrounding the ankle that can become damaged when the ankle is forced into an unnatural position. Although ligament damage frequently occurs during athletics or exercise, ankles are just as often injured stepping off a curb, into a pothole, or onto uneven ground.
The most frequent type of sprain occurs when weight is applied to the foot when it is on an uneven surface, causing the foot to "roll in" or "turn" (inversion). This places the sole of the foot in such a position that it points inward as force is applied, so the ligaments stabilizing the outside part of the ankle become stressed. Many people

report hearing a "snap" or "pop" when an injury of this type occurs. Following such an incident, one experiences difficulty walking and, in a short time, the outside aspect of the injured ankle begins to cause pain and swells, sometimes so excessively that people believe it is broken.

Upon physical examination, the ankle will exhibit swelling and discoloration (black and blue) over the outside part of the joint. Touching of the area will result in a variable amount of discomfort. Frequently, there is instability notes on the drawer test as the heel structures are moved forward and back as the leg is stabilized. Range of motion (ROM) in the ankle can be limited due to pain and swelling, but strength is not usually affected. X-rays are essential, as the possibility of a fracture must be ruled out.

Degree of Severity of Ankle Sprains:

Grade 1
Mild sprain, mild pain, little swelling, and joint stiffness may be apparent
Stretch and/or minor tear of the ligament without laxity (loosening)
Usually affects the anterior talofibular ligament
Minimum or no loss of function
Can return to activity within a few days of the injury (with a brace or taping)

Grade II
Moderate to severe pain, swelling, and joint stiffness are present
Partial tear of the lateral ligament(s)
Moderate loss of function with difficulty on toe raises and walking
Takes up to 2-3 months before regaining close to full strength and stability in the joint

Grade III
Severe pain may be present initially, followed by little or no pain due to total disruption of the nerve fibers
Swelling may be profuse and joint becomes stiff some hours after the injury
Complete rupture of the ligaments of the lateral complex (severe laxity)
Usually requires some form of immobilization lasting several weeks
Complete loss of function (functional disability) and necessity for crutches
Usually managed conservatively with rehabilitation exercises, but a small percentage may require surgery
Recovery can be as long as 4 months

Q angle

The Q angle is the angle formed by a line drawn from the anterior superior iliac spine to the midpoint of the patella, and a line drawn through the midpoint of the patella and the tibial tuberosity. A large Q angle has been suggested by some investigators to predispose to patellofemoral pain syndrome and has been used to explain the female predilection to the syndrome; a larger Q angle may create lateral hypermobility, resulting in abrasion of the patellar cartilage.

A "normal" Q angle varies from 10 to 22 degrees, and measurements vary from physician to physician. In addition, several studies have found similar Q angles in affected and nonaffected legs. Thus, the importance of the Q angle in the pathogenesis of patellofemoral pain syndrome is unclear.

Principles of Appropriate Antibiotic Use for Acute Respiratory Infections

Principles of Appropriate Antibiotic Use for Acute Respiratory Infections

The CDC recently convened a multi-disciplinary expert panel to produce evidencebased practice guidelines for the appropriate use of antibiotics in acute respiratory
infections. The guidelines were published in full in the March 20, 2001 issue of the Annals of Internal Medicine.

Principles of appropriate antibiotic use for treatment of nonspecific URI in adults:

1) The diagnosis of nonspecific upper respiratory tract infection should be used to denote an acute infection in which sinus, pharyngeal, and lower airway symptoms, although frequently present, are not prominent. These infections are predominantly viral in origin, and complications are rare.
2) Antibiotics should not be used to treat nonspecific upper respiratory tract infections in previously healthy adults.
3) Purulent secretions from the nares or throat (commonly observed in patients with

uncomplicated upper respiratory tract infection) predict neither bacterial infection nor benefit from antibiotic treatment.

Principles of appropriate antibiotic use for treatment of acute sinusitis in adults:
1) Sinus radiography is not recommended for the diagnosis of uncomplicated sinusitis.
2) Acute bacterial sinusitis does not require antibiotic treatment, especially if symptoms are mild or moderate.
3) Patients with severe of persistent moderate symptoms and specific findings of bacterial sinusitis should be treated with antibiotics. Narrow-spectrum antibiotics are reasonable first-line agents. In most cases, antibiotics should be used only for patients with specific findings of persistent purulent nasal discharge and facial pain or tenderness who are not improving after 7 days or those with severe symptoms of rhinosinusitis, regardless of duration. On the basis of clinical trials, amoxicillin, doxycylcine, or trimethoprim-sulfamethoxazole are the favored antibiotics.

Principles of appropriate antibiotic use for treatment of acute pharyngitis in adults:
1) Clinically screen al adult patients with pharyngitis for the presence of the four Centor criteria: history of fever, tonsillar exudates, no cough, and tender anterior cervical lymphadenopathy.
2) Do not test of treat patients with none or only one of these criteria. These patients are unlikely to have GABHS infections.
3) For patients with two or more criteria, the following strategies are appropriate: a) Test patients with two, three, or four criteria by using a rapid antigen test, and limit antibiotic therapy to patients with positive test results; b) test patients with two or three criteria by using a rapid antigen test, and limit antibiotic therapy to patients with a positive test result or patients with four criteria; c) do not use any diagnostic tests, and limit antibiotic therapy to patients with three or four criteria
4) Do not perform throat cultures for the routine primary evaluation of adults with pharyngitis or for confirmation of negative rapid antigen tests when the test sensitivity exceeds 80%. Throat cultures may be indicated as part of investigations of outbreaks of GABHS disease, for monitoring the development and spread of antibiotic resistance, or when such pathogens as gonococcus are being considered.
5) Administer appropriate analgesics, antipyretics, and supportive care to all patients with pharyngitis.

Principles of appropriate antibiotic use for treatment of acute bronchitis in adults:
1) The evaluation of adults with an acute cough illness or a presumptive diagnosis of uncomplicated acute bronchitis should focus on ruling out serious illness, particularly pneumonia.
2) Routine antibiotic treatment of uncomplicated acute bronchitis is not recommended, regardless of duration of cough.
3) Patient satisfaction with care for acute bronchitis depends most on physicianpatient communication rather than whether an antibiotic is prescribed.

Concussion Parameters: Guidelines For Return to Competition

Concussion Parameters: Guidelines For Return to Competition

Grade 1 Concussion
Definition: Transient Confusion, no loss of consciousness, and a duration of mental status of < 15 minutes

Grade 2 Concussion
Definition: Transient Confusion, no loss of consciousness, and a duration of mental status of > 15 minutes

Grade 3 Concussion
Definition: Any loss of consciousness, either brief (seconds) or prolonged (minutes)

MANAGEMENT

Grade 1: may return same day if postconcussive

symptoms resolve within 15 minutes
Multiple Grade 1 concussion: 1 Week

Grade 2: 1 Week
Multiple Grade 2: 2 Weeks

Grade 3 – brief (seconds) loss of consciousness: 1 Week
Grade 3 – prolonged (minutes): 2 Weeks
Second Grade 3 Concussion: A minimum of one month. Any
abnormality on CT/MRI consistent with edema, contusion, or other intracranial pathology should result in termination of the season and return to play in the future should be seriously discouraged.

When comparing a non-Q-wave myocardial infarction with a Q-wave infarction, which of the following statements is true?

a. Non-Q-wave infarctions have a much better 1-year survival profile.
b. Because non-Q-wave infarctions are considered a small infarction, they have a much lower chance of a reinfarction.
c. Non-Q-wave infarctions occur predominantly in the inferior wall; Q-wave infarctions occur predominantly in the anterior wall.
d. Because non-Q-wave infarctions tend to be smaller infarctions, left ventricular function plays no role in prognosis.
e. The mortality associated with non-Q-wave infarctions occurs later when compared to patients with Q-wave infarctions.

E

nonQ MI is generally extensive multiple vessel disease
recurrent reinfarction and ischemia....
good early Px. and poor late Px....

A 52-year-old woman with rheumatoid arthritis (RA) is seen for persistent arthritis. She has a 5-year history of RA now involving her hands, shoulders, and feet. Current medication includes diclofenac 75 mg b.i.d, prednisone 7.8 mg daily, methotrexate 17.5 mg weekly, and folic acid 1 mg daily. In the past she had been treated with hydroxychloroquine (Plaquenil) and minocycline. Examination shows swelling and tenderness in her proximal interphalangeals (PIPs), metacarpalangeals (MCPs), and wrists. The next step in therapy should be:

a. Increase prednisone to 15 mg.
b. Change methotrexate to 1M gold.
c. Begin on Enbrel.
d. Administer IV pulse cyclophosphamide.

The correct answer is c.
c. This patient is relatively refractory to current therapy. In efforts to control the symptoms of these patients more combination therapy has been used. Targeting specific mechanisms of inflammation has been a goal of therapy in RA. Enbrel (etanercept) is a fusion protein formed from soluble tumor necrosis factor (TNF) receptors and the FC portion of an antibody molecule. TNF appears to be a central cytokine in the inflammation of RA. This agent administered subcutaneously has led to improvement in 65% of patients with 15% achieving 70% improvement. Currently, combination therapy with methotrexate represents the best available therapy in many patients.

short course of corticosteroids(20mg/day prednisone initially, with a rapid taper over 5days) may be effective for controlling disease flares and for bridging treatment periods in which DMARDs have not yet controlled disease. virtually, the clinical effectiveness of gold is disappointing and MTX to alternative DMARD is difficult to regain disease control....

A 75-year-old man presents with a complaint of right hip pain that occurs mainly when he lies on his right side and when he stands with his weight on the right leg. On physical examination, there is no groin tenderness, and there is full range of motion of the hip.
The most appropriate next step in management of this patient is:

a. Perform a straight leg-raising maneuver.
b. Palpate the soft tissues of the lateral thigh.
c. Obtain an erythrocyte sedimentation rate.
d. Obtain a radiograph of the right hip.

B

b. Trochanteric bursitis occurs frequently, but it is often undiagnosed. Patients frequently describe it as hip pain, and they may complain of symptoms that suggest radiculopathy. The diagnosis is made by eliciting localized tenderness on palpation of the soft tissues overlying the greater trochanter.

Which of the following statements about seronegative rheumatoid arthritis (RA) is true?

a. It is frequently associated with extraarticular disease.
b. It rarely causes joint erosions.
c. It carries a worse prognosis than seropositive RA.
d. In the elderly, it may mimic polymyalgia rheumatica.
e. All of the above

The correct answer is d.
d. Ten to thirty percent of adults who meet diagnostic criteria for RA do not exhibit serum rheumatoid factor. These patients rarely have extraarticular disease but do develop erosive disease. A small subset of patients with polymyalgia rheumatica may present with hip and shoulder pain, making these two conditions difficult to distinguish clinically

Overall these patients have a better prognosis and a better survival rate.
Fewer extraarticular manifestations are seen, but erosive disease may still be present nevertheless.
One should always look out for other possible diagnoses such as systemic lupus erythematosus, psoriatic arthritis, and for the presence of microcrystalline deposits such as those seen in gout or pseudogout.

Which of the following food- or waterborne bacteria responsible for diarrheal illness has the LONGEST incubation period (time from ingestion to illness)?

A Clostridium perfringens
B Staphylococcus aureus
C Bacillus cereus
D Campylobacter jejuni
E Vibrio parahaemolyticus

The answer is D
Bacteria that cause diarrhea via elaboration of toxins generally are associated with a shorter time from ingestion to illness than are invasive strains. For example, enterotoxigenic E. coli (the most common cause of traveler's diarrhea), C. perfringens (associated with poorly cooked meat or poultry), S. aureus (associated with improperly refrigerated dairy foods), and B. cereus (associated with grossly contaminated uncooked rice) all have incubation periods of 24 h or less. Even though the pathogenesis may depend on direct mucosal damage, V. parahaemolyticus, which is present in inadequately cooked seafood, can cause a diarrheal illness within 6 to 48 h after consumption of a contaminated food. Ingestion of water contaminated with the intestinal flora of wild or domestic animals may cause infection with C. jejuni, a common cause of acute, sometimes bloody diarrhea. The incubation period for this invasive bacterium is 2 to 6 days, longer than that associated with other pathogens. Therapy is usually supportive, though erythromycin will shorten the duration of illness.

An 19-year-old man is brought to the emergency department because of a bicycle accident. He was riding with a group of friends who noted that the patient's bike hit a rock, the bike tumbled, and the patient's head hit the pavement. Unconsciousness lasted about 30 s. It is now approximately 1 h after the accident. At this time the patient is alert, though he has thrown up once and complains of difficulty in concentration and blurred vision. Furthermore, he is complaining of a severe frontal headache. The physical examination is notable for the absence of blood at the tympanic membranes and the mastoid processes and a completely nonfocal neurologic examination. Skull x-rays and MRI are normal. The most appropriate course of action at this point is to

A obtain a neurosurgical consultation
B admit the patient to the hospital for observation
C administer phenytoin and admit the patient to the hospital for observation
D perform an electroencephalogram
E discharge the patient home in the care of his friends

The answer is E

Concussion, the transient loss of consciousness consequent to blunt impact to the skull, is believed to occur because of electrophysiologic dysfunction of the upper midbrain as a result of sudden movement of the brain within the skull. About 3 percent of those with concussions also have an associated intracranial hemorrhage, but the absence of a skull fracture decreases the risk. Amnesia for events just prior to the trauma is common, as are a single episode of emesis, severe bilateral frontal headache, faintness, blurred vision, and problems with concentration. However, minor injuries are characterized by an absence of neurologic signs, normal skull x-ray, and normal CT or MRI scans. In the absence of persistent confusion, behavioral changes, decreased alertness, or focal neurologic signs, patients may be discharged to be observed by responsible individuals. Several more worrisome clinical syndromes may accompany more severe head injury. Such symptoms are characterized by (1) delirium and wishing not to be moved, (2) severe memory loss, (3) focal deficit, (4) global confusion, (5) repetitive vomiting and nystagmus, (6) drowsiness, and (7) diabetes insipidus. Positive findings on CT scan or EEG would be common with these types of postconcussive syndromes, neurosurgical evaluation would be required, and prophylactic phenytoin, glucocorticoids, and haloperidol could be considered.

Which of the following is the best predictor of hemodialysis efficacy?

a. Pretreatment BUN
b. Interdialytic weight gain
c. Urea reduction ratio (URR)
d. Serum potassium
e. Hemoglobin level

The correct answer is c.
c. The pretreatment BUN was once considered a reasonable guide; however, it can be affected by protein intake as well as efficiency of treatment. Most physicians now accept the URR as the best indicator. Urea modeling is a standard component of the monthly laboratory work evaluated in dialysis patients, with a value of 65% to 70% or greater seen as adequate for hemodialysis. These values have been associated with improved long-term survival rates.

A 26-year-old man with 1-year status postcadaveric transplant presents for routine follow-up. He has no complaints. His BP is 180/95. He is afebrile. Examination is unremarkable except for a renal allograft in the right

iliac fossa. Review of his laboratory work from the last four visits shows his creatinine at 1.4, 1.5, 1.7, 1.8 mg/dL. Today his creatinine is 2.0 mg/dL, his urine shows 2+ protein, and his cyclosporine A (CSA) level is at the lower end of the acceptable range.
The most likely diagnosis of this patient is

a. CSA nephrotoxicity
b. Acute rejection
c. Chronic rejection
d. Benign nephrosclerosis

The correct answer is c.
c. The slow rise in the creatine kinase over a period of 5 months, hypertension, and proteinuria all suggest chronic rejection. CSA toxicity is not likely, given that the level was in the low therapeutic range. Acute rejection is ruled out by the slow progression and also is less likely to occur 1 year after transplantation, although this can happen. Benign nephrosclerosis is a process that occurs in native kidneys over many years and is not pertinent to this case.

in hypertensive patient, benign urinary sediment (but in this case,,,protein 2+...generally less than 1g/day in benign nephrosclerosis, no chronic lead intoxication history..)..
so i am leaning toward c...

Which of the following statements about acute interstitial nephritis (AIN) is true?

a. In children, it is usually due to a drug reaction.
b. It can be ruled out by the absence of eosinophils in the urine.

c. It generally requires treatment with steroids for complete resolution.
d. The triad of fever, rash, and eosinophilia is found in less than 33% of cases.
e. It is rarely associated with gross hematuria.

The correct answer is d.
d. In adults, AIN is usually due to drugs; in children it most often follows an infection. The finding of eosinophils in the urine supports the diagnosis of AIN; however, their presence has been variable and their absence should never be used to rule out the diagnosis. Although there is a role for the use of steroids in treating cases of AIN that are particularly severe or longstanding, the mainstay of therapy is removal of the offending agent. Generally, steroids are not necessary. AIN has frequently been reported to cause gross hematuria. Although eosinophilia has been reported in 80% of cases, fever in about 75%, and rash in up to 50%, the entire triad is present in less than 33% of cases. It is uncommon in AIN due to use of nonsteroidal antiinflammatory drugs.

Urinalysis reveals nonnephrotic-range proteinuria, commonly with microscopic hematuria. Gross hematuria has been reported, although the sediment in about 75% of patients shows only moderate amounts of red and white blood cells. White cell casts can be observed (in the absence of infection), but red cell casts are so uncommon that their presence should suggest an alternative diagnosis of glomerulonephritis.

hematuria, proteinuria, and pyuria are present in over 80% of cases,
the hematuria -90% microscopic
the role of corticosteroid in this disorder is uncertain, however a relapse may occur as the prednisone is being discontinued
eosinophiluria (wright's stain)
skin rash : 30-50% of cases
eosinophilia : 30-60% of cases
as different picture of NSAID induced AIN , there is frequently no eosinophilia or eosinophiluria and nephrotic range proteinuria and edema may also be present

40 yrs old diabetic male came in ER following a MVA with spinal injury and lost his cremesteric reflex. Rest of the reflexes are normal. This is due to:

a) Partial spinal shock
b) injury at the level of T7-12
C) Injury at the level of L1-2
d) Diadetic neuropathy
e) Injury at the level of S3-4

C

absent of cremasteric reflex is good indicator of testicular torsion

A 45 years old woman with history of DM and mild Hypertension with occational history of seizure for last 6 month came to your office with H/O 6 hours headach, right sided partial ptosis, pain in lower half of face and neck rigidity. What would be the cause?

a)Trigeminal neuralgia
b)SAH of Post communicating artery
c)SAH of ICA
d)Brainstem glioma
e)Lacunar stroke

60 years old female h/o chronic Diabetes & Hypertension with a left sided stroke came in ER 3 month ago with repeated attack of seizure. There she was given some anti-seizure medication for chronic control. But last two months she developed incontinence with no urinary symptoms. The most likely cause is

a)UTI
b)Phenytoin therapy
c)Carbamazapine
d)Valproic acid
e)BHP

D

incontinence without urinary sx. like enuresis...is one of the side effects of valproate

carbamazepine: hypersensitivity, BM suppression, skin side effect
additionally, urinary incontinence due to drug side effect : diuretics, anticholinergics, alpha adrenergic agent, narcotics, psychotropics

A 52-year-old woman complains of recurrent sudden attacks of vertigo and tinnitus for 4 years. She notes that her hearing has become progressively worse. She is asymptomatic during the time of examination. Neurologic examination shows decreased hearing for low tones. She has no nystagmus and no facial sensory loss or facial asymmetry. The balance of the neurologic examination is likewise normal.
The most likely diagnosis of this patient is

a. Acute labyrinthitis
b. Acoustic neuroma
c. Ménière's disease
d. Benign positional vertigo
e. Brainstem transient ischemic attacks

C

This patient has a triad of symptoms considered to be classic for Ménière's disease. This triad consists of vertigo, tinnitus, and hearing loss. Attacks are recurrent, and the patient is usually asymptomatic between bouts of Ménière's disease. Vertigo is usually severe and occurs suddenly. Hearing loss is sensorineural in type, with decreased perception of low tones. Hearing loss becomes increasingly severe and eventually leads to severe cochlear damage and total deafness.

A genital ulcer without inguinal adenopathy would most likely be

a. Granuloma inguinale
b. Chancroid

c. Syphilis
d. Lymphogranuloma venereum
e. Gonorrhea

The correct answer is a.
a. Granuloma inguinale is a sexually-transmitted disease that is caused by Calymmatobacterium granulomatis. The incubation period ranges from 2 weeks to 3 months. The initial genital lesion may be a papule, a nodule, or an ulcer. The inguinal swelling, or pseudobubo, may look like a lymph node, but true inguinal adenopathy is unusual.

A 17-year-old man has a tender ulceration on the penis with inguinal lymphadenopathy. A smear from the ulcer shows chains of bacilli in a "school of fish" arrangement. The best treatment for this condition is

a. Amoxicillin
b. Benzathine penicillin
c. Ceftriaxone
d. Acyclovir
e. Tetracyline

The correct answer is c.

c. Chancroid is a sexually transmitted disease characterized by painful genital ulcers with inguinal lymphadenopathy. The causative organism, Hemophilus ducreyi, a gram-negative coccobacillus, may be seen on Gram stains of the ulcers. Either ceftriaxone (one dose of 250 mg intramuscularly) or oral erythromycin (500 mg 4 times per day for 7 days) is very effective treatment.

In an adult male who is allergic to penicillin, the treatment of choice for syphilis is

a. Erythromycin
b. Cephalexin
c. Clindamycin
d. Tetracycline
e. Rifampin

D

In penicillin-allergic patients with syphilis, tetracycline is the treatment of choice. Erythromycin can be given, but failures may occur with this drug.

A 35-year-old woman presents with obesity, proximal muscle weakness, mild hypertension, and a blood glucose of 156 mg/dL. Physical examination reveals slight roundness of the face and abdominal striae. Which of the following tests would be best to confirm or rule out your clinical impression?

a. Measurement of 24-hour urinary-free cortisol
b. Computerized tomography (CT) scan of the pituitary gland
c. Overnight dexamethasone suppression test
d. Measurement of morning adrenocorticotrophic hormone (ACTH) and serum cortisol level
e. Cosyntropin stimulation test

The correct answer is a.

a. An overnight dexamethasone suppression test may be falsely positive (failure to suppress in a patient who does not have Cushing's syndrome), especially in an overweight person. Measurement of a 24-hour urinary-free cortisol will take into account body weight and is not affected by many of the drugs that can interfere with the dexamethasone suppression test. CT of the pituitary gland should be done only after a diagnosis of Cushing's syndrome has been made chemically; you are looking for the cause of the Cushing's syndrome. Nonfunctioning adenoma of the pituitary is relatively common. ACTH levels may be elevated in certain causes of Cushing's syndrome but not in all. Random cortisol levels are not useful in making a diagnosis of Cushing's syndrome because a random level may not be elevated, or it may be elevated because of reasons other than Cushing's syndrome, such as stress. A 24-hour urinary-free cortisol provides a much better idea of the total day's production of cortisol.

Which of the following statements regarding diabetes insipidus is true?

a. It presents with low plasma sodium.
b. The plasma and urine osmolality are equal.
c. Plasma osmolality is greater than 295 mOsm/kg.
d. Treatment is fluid restriction.
e. Urine osmolality is greater than 295 mOsm/kg, and plasma osmolality is less than 295 mOsm/kg.

The correct answer is c.
c. In patients with intact thirst mechanism, the plasma sodium is normal to slightly increased. The urine osmolality is less than plasma osmolality, less than 295 mOsm/kg. The plasma osmolality is greater than 295 mOsm/kg. Urine volume is high, generally more than 3 L per 24-hour period. DDAVP (desmopressin acetate) is the best treatment for chronic central diabetes insipidus.

which is the cost effective trt for H pylori?
1.Aoc- Amox, Omepaera, clarithromycin
2.MOC- metro, omeparo, clarithro
3. RBCC- ranitidine, bismuth, calrithro
4.rani, bismuth, falgyl, tretacycline

what is the intial step?

in treating the new onset pud, what is the first approcach

1. trial of ppi
2. barium swallow
3. endoscopyin treating the new onset pud, what is the first approcach
1. trial of ppi
2. barium swallow
3. endoscopy

what is the best approach

you are treating a patient with pud. the patient compliants are 85% reduced. He was taking medications for 4wks. now to test for hpylori after the trt , what is the best method ?

1. breth urease test.
2. clo test
3. culture
5. stool antigen test
6. serology test for hp

stool antigen test

urea breath test

good for diagnosis and follow up
antibody to H.pylori -unsuitable for follow up

empiric antiulcer therapy for 4-6weeks, ant then failure to respond by 2weeks or recurrence of sx.necessitates further evaluation

amoxicillin,omeprazole,clarithromycin

Prophylaxia endocarditis

Preoperative antibiotics is recommended for patients who have which of the following

a. Hx of CABG

b. Hx of Kawasaki disease

c. Hypertrophy cardiomyopathy

d. cardiac pacemaker

e. an implanted defibrillator

C

A. IE prophylaxis is recommended for the following conditions:
   Prosthetic heart valves
   Previous hx of IE
   Congenital heart malformations
   Acquired valvular dysfunction (as with rheumatic heart disease)
   Hypertrophic cardiomyopathy
   Mitral valve prolapse with valvular regurgitation or thickened leaflets
   Surgically constructed systemic pulmonary shunts or conduits

   B. IE prophylaxis is recommended for the following procedures:

Various dental procedures known to induce gingival/mucosal bleeding (including professional cleaning)
Tonsillectomy or adenoidectomy
Surgery of intestinal or respiratory mucosa
Bronchoscopy with a rigid (not flexible) scope
Sclerotherapy for esophageal varices
Esophageal stricture dilation
Endoscopic retrograde cholangiography with biliary obstruction
Biliary tract surgery
Surgical operations which involve intestinal mucosa
Cytoscopy
Urethral dilation
Urethral catheterization with UTI present
Urinary tract surgery with UTI present
Prostatic surgery

ANAPHYLAXIS-a pt. presents to the ER with severe sob after exposure to some food(i dont recall the type of food this pt. ate.)After the initial stabiliztion i admitted the lady to the icu.She continued to have tachycardia though other sxs resoved.Which medications are good for the tachycadia.? cardizem,beta blockers etc.?

airway
epi
volume expasion, tachycardia may be a sign of shock
albuterol nebulizer
benadryl
prednison

close monitoring

prevention in the future

check washington manual

Never beta-blocker

She could have bronchoconstriction as one of the manifestations of condition

YOU DONT TREAT TACHYCARDIA...IT IS NORMAL RESPONSE DUE TO SHOCK

Definition/Pathophysiology

A systemic reaction (usually life-threatening) that occurs secondary to an IgE mediated antigen induced reaction (allergen) or exposure to mast cell degranulating agents (anaphylactoid). Both reactions cause mediator release (histamine, leukotrienes, PAF, etc.) which produce the symptoms. While there is often a history of prior exposure to a given antigen, in the non-IgE mediated (anaphylactoid) reactions, symptoms may occur during the first exposure.

Clinical Course

Symptoms usually occur within seconds to 60 min. of Ag exposure.

Variable: Initial symptoms may be mild or life threatening. Generally, the earlier the onset, the more severe the reaction.

Symptoms - cutaneous (urticaria/angioedema, pruritus), respiratory (bronchospasm, stridor, pulmonary edema, laryngeal edema), rhinitis, cardiovascular (hypotension, arrhythmias, myocardial ischemia, vasodilation, flushing), gastrointestinal (nausea, emesis, diarrhea, pain), asymmetric swelling of a limb or perioral area.

Most Common Etiologic Agents

Antibiotics (for instance penicillin, although any could be involved)

Insect (hymenoptera) stings

Foods (nuts, eggs, seafood)

Immunotherapy

Non-IgE (Anaphylactoid) mediated mast cell degranulation:

Morphine

Codeine

Polymyxins

Radiocontrast dye

Risk Factors:

Personal history of previous allergic reaction.

Positive skin test.

Sick patient on multiple medications.

Therapy

ABC’s

Establish airway if significant compromise.

May need intubation or trach. if no relief with epi.

Oxygen if respiratory distress or hypotension.

Stop antigen administration - if insect bite or allergy shot, isolate antigen site with tourniquets and inject 0.01 cc/kg epi. (1:1000) SQ into site after tourniquet applied. Flick off (do not squeeze) any stinger present.

Epinephrine:

Mainstay of treatment

SQ or IM 0.01 cc/kg of 1:1000 sol'n, max 0.3 cc, may repeat

Rarely IV 1:10,000 by drip and titrate to achieve response, begin at drip of 0.1 mcg/kg/min (only in refractory hypotension requiring CPR).

Immediate IV placement with IVF (LR/NS, bolus 20 cc/kg as needed for shock).

Continue to observe for 24 hrs, as symptoms may recur.

Subjective: SOB, anxiety.

Objective: stridor, retractions, wheezing, cyanosis, pallor.

BP: q 5-10 min initially, then q 1 hr.

Continuous EKG monitor or A-line as needed.

Other drugs as needed (NOT a substitute for epi.).

H1 Antihistamine - Benadryl 0.5-1.0 mg/kg po or slow IV push.

Steroids - 1-2 mg/kg methylprednisolone to prevent late phase response.

Cimetidine IV 5-10 mg/kg given over 5 min - given in association with H1 antihistamines may reverse profound hypotension unresponsive to fluids/pressors (this is controversial).

Glucagon may be effective in reversing hypotension in rare cases, especially if beta-blockade is present. (Dose: < 10 kg: 0.1mg/kg IM, > 10 kg: 1 mg/dose IM).

For cardiorespiratory arrest, continue with BCLS/ACLS algorithms.

Differential diagnosis includes:

Insulin reaction

Vasovagal syncope

Arrhythmias

Hereditary angioedema

SICKLE CELL CRISIS- a 5 y.o .aa male present to the clinic with severe right arm and chest pains.No family h/o sickle and no history of ss was mentioned in the initial presentation.Vitals i think showed a moderate fever.I ordered stat xray of the arm which was normal.
i ordered stat ekg and cbc with diff. which showed sickle cells in the p. smear,hemoglobin of 3.5, low mcv but normal plts.Pt. was sent to the ER.where i.v.fluids was initiated plus iv morphine and antibiotics,cardiac monitor.The ekg results look very weird.He improved well so i admitted him to picu.He continued to do well and all his sxs resolved.

Minors and the Right to Consent to Health Care

The notion that many minors have the capacity and, indeed, the right to make important decisions about health care has been well established in federal and state policy. Many states specifically authorize minors to consent to contraceptive services, testing and treatment for HIV and other sexually transmitted diseases, prenatal care and delivery services, treatment for alcohol and drug abuse, and outpatient mental health care. With the exception of abortion, lawmakers have generally resisted attempts to impose a parental consent or notification requirement on minors' access to reproductive health care and other sensitive services. Nevertheless, the movement to "restore" parental rights and to legislate parental control over minors' reproductive health care decisions remains active.

ccs cases

1.ectopic pregnancy- pt. presents to the clinic with lower abdominal pains,fever,n/v,and appears dehydrated.After the physicals and pelvic exam, the first thing i did was to order pregnancy test.It was positive in the clinic so I assume that ectopic pregnancy must be ruled out in the ER.Ultrasound confirmed the ectopic pregnancy.
2.hyperthyroidism-pt. presents to the clinic with tremors,tarchicadia and other sx i can't remember well.
3.chf new onset.

4.depression- a thirty something y.o. AA male was sent to your clinic by his wife who c/o of pt. being depressed and need medication.Pt. also c/o reduced sexual desires.All other history-fmhx,shx,pmhx and physicals are all normal.How do proceed from here.
I started the guy on zoloft and obtained all the basic labs-cbc, chem7,ua, testosterone level, tyroid level, and i asked him to come back in one week.He showed up saying he is feeling a little better,all his labs were noemal.I asked him to continued the zoloft and return in 2weeks but the computer prompted me by saying the guy is too busy to show up,it then asked me to give the final DX.
Could anybody comment on this particular ccs case.Should i have given the guy VIAGRA?

Which of the two elements that must present to make the Dx of primary aldosteronism

a. Adenoma in the zona flomerulosa and hypertension

b. abd bruit and hypertension

c. hypokalemia and elevated renin

d. hypokalemia and hypertension

e. Purple striae and dorsal hump

D

Primary aldosteronism:

Overview:
twice as common in women as in man
most often presents between 30 in 50 years of age

Most common cause:
adrenal adenoma -- excessive aldosterone production
unilateral adenoma (usually small; either side)
Conn's syndrome
Other causes:
hyperplastic adrenal glands -- abnormal secretion
malignant tumor
adrenal carcinoma (rare)

Physiological Effects of aldosterone hypersecretion:
increased renal distal tubule or exchange of sodium for secreted potassium and hydrogen ions -- body potassium depletion/hypokalemia

Diagnosis--Criteria:
diastolic hypertension (no edema)

renin hyposecretion (low plasma renin activity)
renin secretion does not increase with volume depletion
aldosterone hypersecretion that is not suppressed with volume expansion

Clinical Presentation:
diastolic hypertension (not very severe)
secondary to increase sodium reabsorption/volume expansion
headaches
polyuria, polydipsia
impairment of urinary concentrating ability
weakness
due to effects of potassium depletion
tetany
Electrocardiographic changes -- consistent with potassium depletion (hypokalemia-- which increases ectopy)
prominent U waves
cardiac arrhythmias
premature contractions
Many effects secondary to potassium loss associated with:
hypokalemia
may be severe (< 3 mmol/L)
hypernatremia-- due to:
sodium retention
water loss from polyuria
metabolic alkalosis-- due to
urinary hydrogen ion loss
movement of hydrogen ion into potassium-depleted cells
alkalosis enhanced by potassium deficiency which increases proximal convoluted tubule capacity to reabsorb filtered bicarbonate.

Treatment:
Due to adenoma -- usually treated surgically
may be treated by:
sodium intake restriction
aldosterone antagonist (spironolactone (Aldactone))
prolonged medical management (chronic therapy) may be side effect limited (males)

gynecomastia
decreased libido
impotence
Due to idiopathic bilateral hyperplasia
symptomatic hypokalemia treated by:
spironolactone (Aldactone)
triamterene (Dyrenium)
amiloride (Midamor)
surgery if pharmacological treatment fails

Barter's Syd=Hyper K +Normal BP+ Decr Na
Primary Ald=HTN+ Hypo K+Hyper Na
Secondary Ald=Incr Renin + decr K + HTN not prerequesite

Tx of thyroidism with levothyroxine or thyroxine takes how long to achieve full effect
A.1 week
B. 1 month
C. 2 month
d. 3 month
e 4 month

Due to the long half-life of levothyroxine, the peak therapeutic effect at a given dose of levothyroxine may not be attained for 4-6 weeks.

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Here is the cases I had last year.

1 25 yo female, at 10 weeks pregnancy
2 25 yo asian female nurse fatigue Dx anemia
3 70 yo duodenal ulcer w/ NSAID
4 70 yo Alzeheimer dementia
5 54 yo stable angina and HTN
6 15 yo vaginal bleeding
7 suicide amtyptlin overrdose
8 70 yo SOB did not response to Tx for COPD exacerbation, Possible PE
9 Hepatitis

Police brought this old baba of 65yrs old, wandering in the very cold weather with out any cloth out side his house. He lives alone after the death of his wife a year ago. Since he was unable to pay the electricity bill he was with out any heater in the house for three days. A friend of him finds out that he didt call for two days so he called the police to check on him. Patiuent condition is bcz:

a: Sever mental retardation.
b: Pathological grief reaction of her wife's death
c: Alcohol induce diorentation
d; Secondry to hypothermia.
e: Early onset alzahimer's disease

B

After a two day fever in a three yrs. old boy. examination in your office show some hyperemia in the pharynx and a genrealaized rash over the body.. tosills looks infected but no sheath. ther were few small palapabe mass in the front of neck no axilary or inguinal LN palpable. neck is supple. U satrt amoxill but the boy came back after five days with same fever.. he lost 2 pounds over 5 days with diarrhoea and dehydration. the fever now is 104F. you will

a: start third generation cephalosporin.
b: start Normal saline in D5W in your office and admit the patient in ward.
c: Start vancomycin as your first choice since he might have Cl. diff
d: Admit the patient in ICU
e) admit the patient in ward.

D

I think it is streptococcal toxic shock syndrome

Streptococcal TSS is characterized by hypotension and multiple organ failure. Considerable overlap occurs with streptococcal necrotizing fasciitis, insofar as most cases occur in association with soft tissue infections; however, streptococcal TSS may occur in association with other focal streptococcal infections, including pharyngeal infection.

Physicians need to be aware and concerned about the potential for life-threatening complications presented by group A streptococcal infections. Even seemingly minor infections (pharyngitis, impetigo) may lead to fatal toxic shock syndrome.

Any fever >101f should be monitored carefully,, if possible in ICU. In this case severity is TSS

You found that the girl is not talktive as she was one year ago when she appeared in the office with her mother. You try to find any reason but she kept her eyes down to the floor? Your examination was noncoclusive. You will tell the patient.

a) Its quite ok to be shy but you are just trying to help her
b) If she wants to talk in private.
c) Is something bothering her and is she willing to talk about it.
d) ask for home health agency to pay a visit in the
house.
e) Report to child protection agency.

B

You interview and exmaine the patient. your focus will be more on:

a) Evidence to find out sexual activity and advice for contraception
b) Evidence to find out any mental retardation.
c) Evidence for any long term effets of the trauma.. PTSD
D) Evidence of any psychological conflict and trauma

D

A 13 yrs old girl presented in your office in a rural area after one month of a car accident with pain in tha abdomen. She was unable to focus in the school since the accident and was mostly home bound. In the accident her mother fractured her femur and she is home bound too. The father of the girl ask you too sign a medical letter for the school and another one to the county to arrange a home tutor for her since she is unable to attend the school. You will...

a: Tell the father that you will examine her first and then if u feel then you will write the letters.
b)Write both letters
c)write only letter for the school and not for the county for home teacher program
d) Focus on relevent inforamtion regarding her abdomenal pain

D

As an ER physician u received a call that a 18 yrs old boy is coming after an accident. You check the patient and bed side EEG is showing no activity. Considering for organ donation you check the ID and u see that he is enrolled for organ donation. Asian parents of the boy are in the ER and when they know about organ donation enrolment and that you are planning for it they get very upset. You will...

a) Tell the paretns that what good this noble activity will bring in the life of those who will get the organs.
b) you will wait for another EEG.
c) Will tell the ER team to observe the patient for 24 more hours.
d) Proceede with the organ donation procedure since the boy is an adult.

D

Since brain death is a clinical diagnosis and physician is considering for organ donation....choices b and c are not likely...
Asian parents are upset....and in this delicate situation...i dont know may be a or d?

Which of the following is NOT a Tx for a patient with an acute gout attack
a. Ibuprofen
b. Aspirin
c. Colchicine
d. intraarticular steroid
e. Im steroid

B

Acute Gout: Treatment

Acute episodes are treated with NSAIDs. Ibuprofen 800 mg three to four times daily or Indomethacin 25 to 50 mg four times daily are often chosen because of their quick onset of action, but most NSAIDs can be used. The new selective COX-2 inhibitors (celecoxib, rofecoxib) should work as well, but have not been formally tested in controlled trials. Treatment should be discontinued when symptoms resolve.
In patients with contraindications to NSAID use, corticosteroids are the next choice. Intra-articular steriods are useful if only one or two joints are affected and the treating physician is proficient in injecting those joints. Oral prednisone can be used starting at 30-40 mg daily tapering over 10-14 days. Hospitalized patients can be given equivalent doses of corticosteroids intravenously.(ref 2)

Use of high dose colchicine either orally or IV is discouraged except in rare instances. High dose oral colchicine (1.2 mg followed by 0.6 mg every hour for 6 doses) is poorly tolerated because of GI side effects. IV colchicine (2 mg IV then 1 mg in 12 hours) is associated with serious toxcities including myopathy, neuropathy and aplastic anemia.

What not to do:
Do not depend on serum uric acid to diagnose acute gouty arthritis--it may or may not be elevated (> 8mg/ dl) at the time of an acute arthritis.
Do not use NSAIDs when a patient has a history of active peptic ulcer disease with bleeding. Relative contraindications include renal insufficiency, volume depletion, gastritis, inflammatory bowel disease, asthma and congestive heart disease.
Do not start maintenance NSAID doses for an acute inflammation. It will take a day or more to reach therapeutic levels and pain relief.
Do not insist upon re-confirming a diagnosis of gout in the ED by ordering serum uric acid levels (which are often normal during the acute attack) or tapping an exquisitely painful joint in a patient with known gout.
Do not, during an acute attack of gouty arthritis, attempt to reduce the serum uric acid level with probenecid, allopurinol, or sulfinpyrazone. This will not help the arthritis, and may even be counterproductive. Leave it for follow up.
Do not, use asprin because of its side effects.

PROCEED TO A CASE OF BRONCHIAL ASTHMA

Watch Pt's vital sign

If in offic

P/E:HEENT/Ht/Lg/General

Do Peak flow <300 send Pt

ER

1.PulseO2

2.100% O2

3.Peak flow [Low]

4.Nebulised Ventolin

5.CXR{exclude chest infection]

6.ABG-[If pulse O2<90%]

15 min after

peak flow+ Nebulizer

15 min after

peak flow+ nebulizer

if pt better

Prednisolone oral stat

2hrs pt better[stop O2]

1.LFT

Dicharge

1.Prednisolone-7days

2.Inhaled steroid-tid

3.Inhaled ventoline-prn

see after 7 days

Advice

Dx-Acute exasserbation of chronic asthma

You may also consider allergy skin test for environmantal control

a 44 y.o man comes for health maintainance. He has no sig. past medical HX. He drinks socially. He denies having any alcohol related problems.

What is the next step in screening for alcohol related got this patient.

a. Inquire about the type, frequency, and quantity of alcohol use
b. Administer a standardized questionaire to detect alcohol problem
c. Administer lab. tests to detect alcohol-related medical problems
d. Inquire about criteria that meet definitions of alcohol abuse, dependence, and alcoholism

A

I think answer is a.. screening for a scocial drinker per say should be focused on frequency and quantity,, If an Sx then it simportant to ask for standardize qs regarding abuse and dependenace.. What u think?

An 85-year-old white male nursing-home resident has a 18 days history of anorexia, malaise, and intermittent fever to 38.5° C (101.3° F). The fever has persisted despite empiric therapy with amoxicillin, followed by ciprofloxacin (Cipro). Her present weight is 49.5 kg , compared to 54.5 kg 3 weeks ago. Her mental status, characterized by a dementia pattern consistent with Alzheimer's disease, has not changed. A physical examination discloses no significant abnormalities. A CBC, urinalysis, erythrocyte sedimentation rate, and chest radiograph are also unremarkable.

Which one of the following is most likely to help make the diagnosis?

1.PPD skin testing
2.Colonoscopy
3.CT scan of the head
4.Serologic testing for syphilis
5.Liver biopsy
ito

A

When vancomycin (Vancocin) should be used instead of cefazolin (Ancef, Defzol) for surgical prophylaxis against infection:

A) prosthetic valve replacement & prosthetic graft implantation

B) any cardiovascular procedure if the patient has (1) has received bra-spectrum antibacterial treatment and (2) is likely to be colonized with cephalosporin-resistant enterococci

C) cardiovascular surgical interventions at hospitals experiencing outbreaks or endemic rates of surgical infection with methicillin (Staphcillin)-resistant staphylococci

C

Vancomycin is the drug of choice for serious infections caused by methicillin-resistant Staphylococcus aureus and coagulase-negative staphylococci (including S. epidermidis). These infections include septicemia, endocarditis, osteomyelitis, pneumonia, lung abscesses, soft tissue infections, wound infections, and meningitis.

Diabetes Management Few Points Diabetes Management Few Points

Assess diabetes control by measuring HbA 1c Every 3-6 months for insulin treated patients.
Every 6-12 months for non-insulin treated patients

Ensure that a comprehensive ophthalmological examination is carried out At diagnosis and then every 1-2 years for patients whose diabetes onset was at age 30 years or more
Within 5 years of diagnosis and then every 1-2 years for patients whose diabetes onset was at age less than 30 years

Measure weight and height and calculate BMI On initial visit, then measure weight every 3 months
Measure weight more frequently if patient is on weight reduction program

Measure blood pressure Every visit

Examine feet Every 6 months or at every visit if ‘high risk foot’ or active foot problem
Ensure that patients with ‘high risk foot’ or an active foot problem receive appropriate care from specialists and podiatrists expert in the treatement of diabetic foot problems

Measure total cholesterol, triglycerides and HDL cholesterol Every 1-2 years (if normal)
Every 3-6 months (if abnormal or on treatment)

Test for microalbuminuria At diagnosis and then every 12 months for patients with NIDDM
5 years post diagnosis and then every 12 months for patients with IDDM

Encourage healthy lifestyle Healthy food choices
Appropriate activity
No smoking

Recommendations for Diabetes Screening of Asymptomatic Persons

Recommendations for Diabetes Screening of Asymptomatic Persons
Timing of first test and repeat tests

A:Test at age 45; repeat every three years:Patients 45 years of age or older

B:Test before age 45; repeat more frequently than every three years if patient has one or more of the following risk factors:

Obesity: >=120% of desirable body weight or BMI >=27 kg per m2

First-degree relative with diabetes mellitus

Member of high risk-ethnic group (black, Hispanic, Native American, Asian)

History of gestational diabetes mellitus or delivering a baby weighing more than 4,032 g (9 lb)

Hypertensive (>=140/90 mm Hg)

HDL cholesterol level ¾35 mg per dL (0.90 mmol per L) and/or triglyceride level >=250 mg per dL (2.83 mmol per L)

History of IGT or IFG on prior testing

(BMI=body mass index; HDL=high density lipoprotein; IGT=impaired glucose tolerance; IFG=impaired fasting glucose.)

A 22-year-old man seeks medical attention for perennial nasal congestion and postnasal discharge. He states he does not have asthma, eczema, conjunctivitis, or a family history of allergic disease. His nasal secretions are rich in eosinophils. The test most likely to yield a specific diagnosis in this setting is

A serum IgE level (competitive radioimmunosorbent technique)
B serum IgE level (radiodiffusion technique)
C elimination diet test
D skin testing
E sinus x-rays

The answer is D
Allergic rhinitis can be either seasonal as a result of pollen exposure or perennial as a result of exposure to dust or mold spores (or both). In these IgE-mediated reactions to inhaled foreign substances, nasal eosinophilia is common. Vasomotor rhinitis is a chronic, nonallergic condition in which vasomotor control in the nasal membranes is altered. Irritating stimuli, such as odors, fumes, and changes in humidity and barometric pressure, can cause nasal obstruction and discharge in affected persons, and nasal eosinophilia is not noted. Because the man described in the question has either perennial allergic rhinitis due to dust or mold-spore allergy or eosinophilic nonallergic rhinitis, skin testing for responses to suspected allergens should be diagnostic. Though total serum IgE may be elevated, demonstration of specificity is critical. Specificity can be demonstrated by binding to a solid-phase antigen and detected by uptake of radiolabeled anti-IgE (radioallergosorbent technique; RAST). RAST is more difficult than skin testing due to the requirement for defined antigens and standardization. Pollen skin tests are unlikely to be helpful because of the perennial nature of the condition described. An elimination diet can be used diagnostically or therapeutically in persons with suspected food allergy; however, food allergy rarely causes rhinitis. Sinus x-rays, whether positive or negative, would not reveal the underlying cause of the rhinitis.

The most common cause od complaint of breast pains is

a. fibrocyctic disease

b. costochondritis

c. trama

d. breast abscess

e. intraductal carcinoma

B

Breast pain is a very common complaint among women, but is rarely an indication of breast cancer.

There are two general categories of breast pain.

The more common type is cyclical(fibrocyctic breast changes or disease). The woman will often feel increasing fullness, heaviness, and tenderness in the two weeks before her period. In some women, the breast pain symptoms are much more severe, but will abate after her period.

A less common, but troublesome, type of breast pain is either constant or spasmodic. Some women describe sharp shooting pains, or severe pains that are occasionally mistaken for heart attack.

Treatment

For pain associated with the disease, over-the-counter analgesics are usually taken. Prescription medications such as danazol or bromocriptine can be used, but are costly and have sometimes have unpleasant adverse affects. If they are very bothersome, lumps can be removed. Preventative measures can help too-- some women report a reduction in lumps after eliminating caffeine from their diet and quitting smoking. Vitamin E is also thought to provide some remedy, but there is no conclusive evidence of its effectiveness.

Each condition listed below is associated with an increased risk of cancer of the esophagus. Which one is most closely linked to adenocarcinoma of the esophagus?

A Achalasia
B Smoking
C Barrett's esophagus
D Tylosis
E Alcoholism

C esophageal ca.
upper 1/3-15%
middle 1/3- 50%
lower 1/3 -35%
squamous cell ca.>85%
adenoca. : distal 1/3 Barrett's esophagus relation

A 24-year-old man with a 12-year history of diabetes reports a fasting glucose level in the 250 to 300 range, a glucose level before lunch in the 110 to 120 range, and a glucose level before dinner and at bedtime in the 80 to 100 range. He also reports restless sleeping for the past several weeks associated with nightmares. He is presently taking 20 units of Neutral Protamine Hagedorn (NPH) and 10 units of regular insulin before breakfast and 10 units of NPH and 5 units of regular insulin before dinner.
Which of the following actions would be the best in the management of this patient?

a. Increase his NPH before dinner to 15 units.
b. Decrease the amount of food he is eating for a bedtime snack.
c. Instead of taking regular and NPH insulin before dinner, have him take both at bedtime.
d. Instead of taking both the regular and NPH insulin before dinner, instruct him to take only the 5 units of regular insulin before dinner and the 10 units of NPH at bedtime.
e. Instruct him to increase his regular insulin before breakfast to 14 units in order to lower his fasting glucose

D

c. The high fasting glucose along with restless sleeping associated with nightmares are suggestive of unrecognized nocturnal hypoglycemia. This is referred to as the Somogyi effect in which nocturnal hypoglycemia is followed by a rebound hyperglycemia. Definite diagnosis can be determined by having the patient set his alarm for 2 A.M or 3 A.M. to check his glucose. This effect can be corrected by taking the NPH insulin at bedtime so its peak action occurs upon arising instead of in the middle of the night. The regular insulin still should be given before dinner. Increasing the NPH insulin before dinner would only increase the nocturnal hypoglycemia. Decreasing his bedtime snack would also increase the nocturnal hypoglycemia. Taking regular insulin with the NPH at bedtime would also cause nocturnal hypoglycemia, because regular insulin is short-acting and would peak during the early morning hours. Increasing the regular insulin before breakfast would not prevent the high fasting glucose because its major action occurs between breakfast and lunch.

A 75-year-old woman has been hospitalized for 4 weeks with multiple medical problems. Her appetite is poor. Her total T4 is 4.5 ìg/dL, T3 resin uptake is 38%, and thyroid-stimulating hormone (TSH) is slightly elevated. What could explain these findings about this patient?

a. She has secondary hypothyroidism
b. She has adrenal insufficiency
c. She has primary hypothyroidism
d. She has euthyroid sick syndrome
e. She has secondary hyperthyroidism

The correct answer is d.

d. This patient has euthyroid sick syndrome or nonthyroidal illness. Patients with euthyroid sick syndrome present with a wide variety of thyroid tests. These abnormalities can generally result in a low T3; the T4 generally is

normal, decreased, or rarely elevated. The T3 resin uptake is generally elevated while the TSH is slightly decreased. The degree of decrease in the T4 correlates with the severity of the illness. It is believed that these changes represent adaptive forms of hypothyroidism. As the patient recovers from his illness, the thyroid function tests improve. Because this is felt to be an adaptive state, no thyroid hormone should be given.

A 26-year-old woman presents with progressive weakness, weight loss, decreased appetite, vague abdominal discomfort, and nausea and vomiting. Physical examination reveals volume loss, hypotension, and obvious weight loss. Laboratory data reveal hypoglycemia, hyponatremia, and hyperkalemia.
The best treatment for this patient would be

a. Prednisone
b. Methylprednisolone IV
c. Hydrocortisone IV
d. Hydrocortisone IV and isotonic saline
e. Isotonic saline

D

patinet Hx. is fit for adrenal failure.
but hyperpigmentation is only for primary adrenal failure(Addison's disease)
i am not sure this case is adrenal crisis or not
cause i didn't find any precipitating facotr Hx. such as illness, surgery, or injury...
but adrenal failure with hypotension must be treated immediately.
hydrocortisone 100mg IV q8h and 0.9%saline with 5% dextrose should be infused until hypotension is corrected, steroid tapering and then change to oral

prednisone
mineralocorticoid replacement is not needed until the dose of hydrocortisone is less than 100mg/day

Which diagnostic technique is used to identify a 24-year-old woman with an enlarged asymmetric thyroid?

a. Serum calcitonin
b. Fine-needle aspiration biopsy
c. Serum thyroglobulin
d. Serum thyroid-stimulating hormone (TSH)
e. Antithyroid microsomal antibody test

D

according to the Cecil,
the most sensitive index to evaluate thyroid status in patients with goiter is the TSH level
TSH can be elevated in the face of normal or low-normal T4 levels and mild normal T3 values, most such patients benefit from thyroxine replacement, with TSH decreasing into the normal range and removing the thyroid growth stimulus
the presence of pressure sx. - evaluation of substernal extension by CT, MRI

Which clinical description is associated with idiopathic hypoparathyroidism?

a. A 9-year-old obese boy with mental retardation and skeletal abnormalities and a serum calcium of 6.3 mg/dL, a phosphorus of 7.5 mg/dL, and a high parathyroid hormone (PTH)
b. A normal-appearing boy except for a short fourth metacarpal bone, with normal intelligence
c. An 8-year-old girl with paresis, especially around the perorate area, muscle spasm and cramps, and irritability. A serum calcium of 5.0 mg/dL, a phosphorus of 7.8 mg/dL, and a low PTH
d. A 32-year-old woman with hypercalcemia nephrolithiasis, depression, polyuria, and polydipsia. A serum calcium of 12.5 mg/dL, a phosphorus of 2.0 mg/dL, and a high PTH
e. A 24-year-old woman whose serum calcium remains high despite parathyroid surgery

C

The correct answer is c.
c. Idiopathic hypoparathyroidism is an autoimmune disorder and occurs as a sporadic or familial disorder. The average time between onset of symptoms and diagnosis is about 6 years. Onset is insidious. Patients experience paresthesia (particularly in the perioral area), muscle spasms, carpopedal spasm, facial grimacing, and, in extreme cases, laryngeal spasms and seizures. Other symptoms include irritability, depression, impaired memory, and psychosis. With longstanding hypocalcemia, patients can experience increased intracranial pressure with papilledema, dry skin, and lack of calcification. The serum calcium is low (generally in the range of 5 mg/dL), the serum phosphorus is increased to approximately 705 mg/dL, and the PTH level is low

idiopathic(autoimmune) hypoparathyroidism may be due to inherited mutations in the PTH gene that prevent synthesis and secretion of PTH
case c hx. is met...low Ca, high P, low PTH, hypocalcemic sx...
and a is for pseudohypoparathyroidism(Albright's hereditary osteodystrophy)
rest of them shows hyperCa something,,,doesn't make sense...

18 years old female with hiatory of HIV +ve came in office regular physical exam PAP is normal. what do you want to do next on her?
a)Annual breast exam
b)advice monthly Breast self exam
c)Colposcopy
d)Repeat PAP on 6 month
e)Repeat PAP next year

Correct ans-C HIV +ve pt needs Colposcopy whatever the PAP **Correct ans-C HIV +ve pt needs Colposcopy whatever the PAP**

according to the blue print
there is synergic effect between HPV and HIV

SO,
HIV positive pap negative ->after 6mo.pap->if negative, do pap every1year

Ambulatory Medicine - Item 58

A 49-year-old woman presents for her annual examination. She has no signs or symptoms of illness. Her medical and family history are negative. She is still having regular menstrual periods, the last beginning 10 days ago. She is gravida 2 para 2, and her method of birth control is condoms.

On physical examination, there is a round, firm, nontender, and mobile mass approximately 1 cm in diameter in the upper outer quadrant of the patient's left breast. Mammogram is negative, but the radiologist suggests that an ultrasound be performed to further evaluate the palpable mass. The ultrasound identifies no cysts.

Which of the following is the best approach to the management of this patient?

(A) Schedule an examination in 6 weeks to re-examine the breast during a different part of the patient's menstrual cycle.

(B) Attempt needle aspiration of the mass.

(C) Reassure the patient and continue routine yearly examinations and mammograms.

(D) Schedule a mammogram in 3 months.

(E) Refer the patient to a surgeon for biopsy of the mass.

Answer: E
Evaluate and manage a discrete breast lump.

This patient illustrates the need for aggressive evaluation of her discrete solid breast mass. Any middle-aged woman with a discrete breast mass should be referred to a surgeon for biopsy regardless of the presence of benign characteristics on physical examination or a negative mammogram. The risk of malignancy increases with age, leading to the axiom that any discrete mass detected on physical breast examination in a woman aged 50 years or older should be considered to be malignant until proven otherwise. Although certain characteristics are associated with benign lesions (for example, masses that are round, mobile, and soft), a review of malignant masses found a significant portion to be regular (41%) and mobile (61%). Therefore, clinical characteristics cannot be relied upon to predict the pathologic nature of a discrete mass. If this were a younger woman with multiple, round, tender lumps or if cysts were identified on ultrasound, a return in 6 weeks for examination during a different part of the menstrual cycle or an attempt at aspiration would be appropriate. However, there is no evidence to support the presence of a cyst. Although a “negative triad” — benign characteristics on physical examination, negative cytology on fine-needle aspiration, and a negative mammogram — has been suggested as an adequate evaluation, studies have reported false-negative rates as high as 16% in the presence of a malignant mass. Risk factors for breast cancer are helpful in predicting the likelihood of a mass’s being malignant, but 75% of women with newly diagnosed breast cancer have no identifiable risk factors. Mammograms are the most sensitive method for detecting breast cancer, but large trials have reported that 3% to 45% of breast cancers are detected by palpation in women with negative mammograms.

screening mammography has been shown by a number of studies to decrease mortality from breast cancer , however, a normal mammogram in the setting of a palpable mass does not exclude a cancer.
mammogram suspicious for malignancy: densities with irregular margins, spiculated lesions, microcalcification,or rod-like or branching patterns
any changes from previous mammogram and any suspicious mass should be considered for Bx.
needle-directed Bx. is useful for nonpalpable mammographic abnormalities and palpable mass

cancer is unlikely if
1. the mass completely disappears after aspiration, does not return, the fluid is hemoccult netative
2. if any these criteria are not met, open excisional Bx.

Pl Correct CCS[18 y/o F with dysurea & lower abdominal discomfort]

Dx=Early pregnancy with UTI [OFFICE]

P/E:

Gen/Ht/Lg/Ab/Genital

Order:

1.Urine-Bhcg

2.U/A microscopic

3 U Culture & sensitivity

Return visit 3 days

[Pregnancy +ve/urine org sensitive to Cipro/Bactrim/Amox]

P/E Ht/Lg/Ab/Genital

Order

Wt & Ht

1 Amox [oral]

2 CBC

3 PAP

4 PPR

5.TORCH titre

6 Blood goup & cross match

7.HbsAg

8.HIV ELIZA

9.Coombs test

Next visit 4wks after

Addition inv

U/A

AFP

USG
Glucola
Final Dx
UTI with Early pregnancy

I think on the initial visit, You should order Pregnancy test and CBC. Not after 3 days.

The case is in the real test, like this: a 30 yo AA woman was brought to your office by her husband and presented with dysnuria and frequency for recent three days, she missed her mens for 6 weeks (didi not know that she is pregnant)

Need to do:

1. Complet prenatal work up
2. Antibiotics: Metro is contraindicated in the 1st trimester 2nd and 3d OK (select Nitroforantoin and amoxillin) I think on the initial visit, You should order Pregnancy test and CBC. Not after 3 days.

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Need to do:

1. Complet prenatal work up
2. Antibiotics: Metro is contraindicated in the 1st trimester 2nd and 3d OK (select Nitroforantoin and amoxillin)

PROCEED TO A CASE OF ANGINA

45 y/o h/o HTN& chest pain in morning walk also burning sensation on empty stomach[smoker/OFFICE]
P/E
HEENT/Ht/Lg/ abdomen/Extrimity

Order

1.EKG

2.CXR

3.H. pylori Ab

4.Lipid profile

Office after 7 days

[H.P-ve/Normal]

P/E

Ht/Lg/Abd

Order

1.ETT

2.24 hrs esophageal ph minitoring

Visit 1 wk

P/E:- Ht/Lg/Abd

[Ph +ve for reflux/ETT +ve]

Order

1.B blocker[pt was in thiazide & pr well controlled]

2.Nitro Oral Long acting.

3.Omeprazol(oral)

Advice

1No smoking

2.No coffie

3.Frequent small diet

Which is the most common causative agent for viral pneumonia in an adult?

A. Influenza

B. Adenovirus

C. Parainfluenza Virus

D. Respiratory cyncytial Virus

E. Varicella

A

Influenza viruses are the most common causes of viral pneumonia in adults, while RSV is the most common etiology of viral pneumonia in infants and children. Influenza usually is seen in epidemics and pandemics in late winter and early spring. On the contrary, RSV infection is seasonal, with rates that increases in the fall, peaks in winter, and returns to baseline in the spring. Peak attack rates for RSV occur in the winter in infants younger than 6 months. Parainfluenza is seen most often in late fall or winter and is the second most common cause of viral illness in infants after RSV infection.

During a general physical examination of a hypertension male smoker, you palpate a pulstile abdominal mass in the mid supraumbilcal region. This mass can be felt laterally as well as anteriorly. Which of the following would put the patient at the greatest risk of a catastrophic complication from your suspected diagnosis

a. Diameter of the mass <4 cm
b. Age of the patient >65 yo
c. Presence of COPD
d. Presnece of chronic hepatitis
e. Presence of diabetes mellitus

Which is the major cause of intracerebral hemorrhage

a. Atrial fibrillation
b. Hypertension
c. Smoking
d. Cerebral aneurysm
e. Coagulopathy

B

hemorrhagic stroke-
intracerebral hemorrhage(hypertensive) -most common
subarachnoid hemorrhage9ruptured aneurysm
A-V malformation
tumor...

All of the following are causes of increased serum prolactin levels except:
Answer
A - Chest wall lesions
B - Haloperidol therapy
C - Meperidine therapy
D - Pituitary tumors
E - Lymphocytic hypophysitis

A

All of the following are therapeutic options for certain kinds of pituitary adenomas except:

Answer
A - Surgical removal of the adenoma
B - Bromocriptine therapy
C - Radiation
D - Octreotide therapy
E - Somatostatin therapy

E

A 45-year-old male complains of occasional discharge from both nipples as well as erectile dysfunction. Which of the following tests is likely to give a correct diagnosis?

Answer

A - Serum prolactin level

B - Serum FSH level

C - Serum LH level

D - Serum ACTH level

E - Serum TSH level

A

Although pituitary tumors that secret prolactin may result in ED and experts recommend that a routine serum prolactin test be performed, prolactin levels are rarely elevated in ED without other symptoms. Hyperprolactinemia, most commonly secondary to a pituitary adenoma, can also result in hypogonadism and erectile dysfunction by interfering with the hypothalamic-pituitary axis.

All of the following statements about empty sella syndrome are true except:

Answer

A - Empty sella syndrome occurs when the subarachnoidal space extends into the sella turcica.

B - Congenital incompetence of the diaphragma sellae is the most common cause of enlarged sella turcica.

C - Empty sella syndrome may be a consequence of Sheehan’s syndrome.

D - Presence of empty sella syndrome excludes the possibility of a pituitary tumor.

E - Most patients are middle-aged obese women

B or C

A 32-year-old male presented with complaints of easy fatigue, feeling cold, constipation and muscle cramping. Physical examination revealed a cool, rough, dry skin; puffy face and hands; hoarse voice; and slow reflexes. Blood pressure was 116/72, pulse 54 min and respiration rate was 11 min. ECG revealed low voltage QRS. Routine urinalysis, complete blood cell count, electrolytes, glucose, BUN, and creatinine were in the normal range. The patient turns had low FT4 and TSH. Which of the following would be an appropriate management?

Answer
A - Levothyroxin supplementation
B - Thyroid ultrasound
C - Serum T3 level
D - Complete assessment of pituitary function
E - TSH supplementation

D

MEN–I syndrome is associated with all of these except:
Answer
A - Renal Stones

B - Diarrhea
C - Cushing’s syndrome
D - Galactorrhea
E - Hypertension

Match this clinical syndrome with its pancreatic endocrine tumor: Diarrhea, hypokalemia, dehydration, hypochlorhydria, flushing, hyperglycemia, hypercalcemia.

Answer
A - Gastrinoma
B - Glucagonoma
C - Insulinoma
D - VIP-oma
E – Somatostatinoma

D

Match this clinical syndrome with its pancreatic endocrine tumor: Abdominal pain, diarrhea, esophageal reflux.

Answer

A - Gastrinoma
B - Glucagonoma
C - Insulinoma
D - VIP-oma
E – Somatostatinoma

A

Match this clinical syndrome with its pancreatic endocrine tumor: Diabetes mellitus, gallbladder disease, diarrhea, steatorrhea, weight loss.
Answer
A - Gastrinoma
B - Glucagonoma
C - Insulinoma
D - VIP-oma
E – Somatostatinoma

B

Match this clinical syndrome with its pancreatic endocrine tumor: Necrolytic migratory erythema, diabetes mellitus, weight loss, anemia, hypoaminoacidemia, thromboembolism, diarrhea

Answer
A - Gastrinoma
B - Glucagonoma
C - Insulinoma
D - VIP-oma
E – Somatostatinoma

B

All of the following are risk factors for development of diabetic nephropathy except:
Answer
A - Decreased plasma prorenin
B - Race
C - Hypertension
D - Increased glomerular filtration rate
E - Poor glycemia control

Which of the following methods is the most reliable as a measure of microalbuminuria in patients with diabetes mellitus?

Answer

A - Measurement of the albumin in a random urine sample

B - Measurement of the albumin-to-creatinine ratio in a random urine sample

C - Measurement of the albumin in a timely (early morning) urine sample

D - Measurement of the albumin in a timely (before sleep) urine sample

E - Measurement of prealbumin in the serum sample

B

Screening for microalbuminuria can be performed by three methods: 1) measurement of the albumin-to-creatinine ratio in a random spot collection; 2) 24 hour collection with creatinine, allowing the simultaneous measurement of creatinine clearance; and 3) timed (e.g., 4 hour or overnight) collection. The first method is often found to be the easiest to carry out in an office setting and generally provides accurate information.

A 52-year-old woman develops watery diarrhea. She does not notice any blood in her stools but some fecal leukocytes are noted. She is afebrile. She was treated for a tooth abscess 2 weeks previously but is not sure of the name of the medication prescribed by her dentist. What is the most likely cause?

a. Toxigenic Escherichia coli

b. E. coli 0157:H7

c. Shigella

d. Giardia lamblia
e. Clostridium difficile

E

usually, 1 or 2 weeks after using antibiotics(clindamycin, ampicillin,etc..)
due to C.difficile enterotoxin
tx.)metronidazole 500mg po(preferred)or IV tid for 7-14days
refractory cases -vancomycin125mg po qh6
dx) c.difficile toxin positive stool

A 65-year-old male patient with cirrhosis would be unsuitable for liver transplantation in the presence of which one of the following factors?

A. Child class B cirrhosis.
B. Hepatocellular carcinoma smaller than 5 cm in greatest diameter.
C. Ascites.
D. Age 65 years or older.
E. Active alcohol abuse.

E

absolute CIx.

1.life-threatening systemic disease

2.uncontrolled extrahepatic bacterial/fungal infection

3.advanced cardiovascular/pulmonary disease

4.multiple uncorrectable life-threatening congenital anomalies

5.metastatic malignancy

6.active drug/alcohol abuse

7.HIV infection

advanced age(>60yo)is relative CIx.

he has to abstain from alcohol use for at least 6 month to be a candidate for liver transplantion

A 42-year-old female presented with pain in the left leg. Pain was mild, dull but constant. On examination there was a difference in the circumference of the calves, with the left leg being 2.5 cm (1.0 inch) bigger. There was also a 1.5 cm increased circumference in the left thigh area. Palpation of the left calf revealed tenderness in the popliteal fossa and half way down the posterior aspect of the calf. This was the first such episode in her life.

Her past medical history was significant only for multiple (3) spontaneous abortions. Impedance pletismography confirmed deep venous thrombosis. Which of the following findings is most likely in the laboratory results of this patient?

Answer

A - Polycythemia

B - Thrombocytopenia

C - Low white blood cell count

D - Hyponatremia

E – Hyperkalemia

B

Of the drugs approved by the U.S. Food and Drug Administration for treatment of intermittent claudication, which one of the following has been shown to be most effective in improving walking distance?

A. Warfarin (Coumadin).
B. Aspirin.
C. Dipyridamole (Persantine).
D. Cilostazol (Pletal).
E. Pentoxifylline (Trental).

D

Two prescription medications are approved by the U.S. Food and Drug Administration for treating intermittent claudication: pentoxifylline (Trental), an oral methylxanthine derivative, and cilostazol (Pletal), a phosphodiesterase III inhibitor. A recent randomized controlled trial comparing the two drugs found cilostazol to be significantly more effective in improving walking distance than pentoxifylline, which was equivalent to placebo. However, cilostazol is associated with a greater frequency of minor side effects, including headache and diarrhea, and is contraindicated in patients with congestive heart failure.

Gastrointestinal endoscopy is superior to contrast radiography in all of the following illnesses except:

Answer

A - Peptic ulcer disease

B - Colonic neoplasm

C - Esophagitis in AIDS

D - Intussusception

E - Crohn’s colitis

D

Which one of the following modalities is the most sensitive for diagnosis of renal calculi?

Answer

A - Abdominal plain film

B - Renal ultrasonography

C - Renal ultrasonography with color Doppler

D - Intravenous pyelography

E - CT scanning

D

CT 95 to 98% sensitine. non contrast CT

before it was IVP

All of the following are recognized risk factors for the development of renal stones containing calcium except:
Answer
A - Hypercalciuria
B - Hyperuricosuria
C - Hypercitraturia
D - High dietary protein intake
E - Low water intake

C?

urine citrate is an inibitor of calcium oxalate precipitation

A 43 year-old female patient had successful removal of the struvite kidney stones by extracorporeal shock wave lithotripsy. Which of the following regimens is the best management for this patient?
Answer
A - No further treatment is necessary since kidney stones are successfully removed.

B - Two to four weeks of antibiotic therapy is necessary to sterilize urinary tract (Proteus and Klebsiella should be covered).
C - The acetohexamic acid (an urease inhibitor) should be used for long-term prevention of the recurrence.
D - Daily fluid intake that ensures 3 liters daily urine output should be maintained for at least 3 months to prevent recurrence.
E - Patient should be followed by biannual renal ultrasound examination since struvite stones recur in almost 75% of patients

Its B
Treat Infection, proteus and Klebs

A 43 year-old female patient with kidney stones underwent extracorporeal shock wave lithotripsy (ESWL). Stones are determined to be pure magnesium ammonium phosphate (struvite) stones. Patient has a history of several episodes of urinary tract infection. Which of the following microorganisms is most likely responsible for her urinary tract infections?

Answer
A - Klebsiella pneumoniae
B - Escherichia coli
C - Mycoplasma hominis
D - Pseudomonas aeruginosa
E - Chlamydia pneumoniae

A

Proteus, Klebsella

Which one of the following is the treatment of choice for most moderate to severe cases of obstructive sleep apnea?

A. Weight loss.
B. Position therapy.
C. Nasal continuous positive airway pressure.
D. Oral airway devices.
E. Uvulopalatopharyngoplasty.

C

Continuous Positive Airway Pressure (CPAP). During sleep, room air is continuously applied by a small, quiet air compressor that delivers positive pressure through a nasal mask. The CPAP system acts as a physical pressure splint to prevent partial or complete collapse of the upper airway during sleep. CPAP is the treatment of choice for patients with moderate to severe OSA, but it is also used to treat patients with mild OSA and those with loud and continuous snoring.

Nasal continuous positive airway pressure

Which one of the following is the gold standard for an accurate diagnosis of obstructive sleep apnea?

A. Otolaryngology evaluation.
B. Polysomnography study.
C. Electroencephalography.
D. Nighttime observation.

B

The gold standard for an accurate diagnosis of OSA is a polysomnography evaluation performed in a sleep disorders unit. During this overnight evaluation, the number of apneas and hypopneas can be quantified, their duration measured, their relationship to body position and sleep stages determined, the level of oxygen desaturation measured and the existence of arrhythmic episodes can be quantified. This information determines the severity of the disorder and helps determine the treatment choice. Other tests often performed to objectively evaluate daytime sleepiness include the Multiple Sleep Latency Test and the Maintainence of Wakefulness Test.

Urge incontinence may be caused by all of the following except:
Answer
A - Urinary tract infection
B - Bladder stones
C - Stroke
D - Idiopathic
E - Multiple pregnancies

E will cause Mechanical which is stress

A 43-year-old male patient with HIV infection presented with fever, cough, chest pain, and dyspnea. Physical examination reveals a thin male patient who is tachypneic. Lung auscultation revealed occasional crackle but

otherwise was normal. To exclude Pneumocystis carinii pneumonia (PCP) which one of the following imaging methods should be used?

Answer

A - Conventional chest x-ray (AP an Lateral)

B - Gallium-67 scintigraphy of the chest

C - MRI of the chest

D - High resolution CT- scan of the chest

E - None of the above

A

All of the following statements about overflow incontinence are true except:

A - Overflow incontinence is caused by detrusor weakness or bladder outlet obstruction.

B - Leakage is typically small in volume, but when it starts it is continuous.

C - Outlet obstruction is the second most common cause of urinary incontinence in older men.

D - Almost all obstructed men develop urinary incontinence.

E - Detrussor overactivity occurs in a majority of men with obstruction resulting in urge symptoms.

E

usually in woman due to detrusor insufficiency(bladder hypotonia) or detrusor areflexia(bladder acontractility)- fecal impaction, medication(anticholinergics, alpha-adrenergic antagonist, epidural and spinal anesthesia), neurological disease (LMN disease, autonomic neuropathy such as diabetes, spinal cord disease, MS)

usually in man due to outflow obstruction due to surgical procedure

What is the most common type of urinary incontinence in women younger than 40 years?

A - Transient urinary incontinence (due to medications, urinary infections, etc.)
B - Stress incontinence
C - Urge incontinence
D - Overflow incontinence
E - UTI-induced incontinence

STRESS

The Approach to the Adolescent With Leg Pain

The Approach to the Adolescent With Leg Pain

Extremity pain is a common problem in all age groups. It may be difficult to distinguish between bone, muscle, joint or referred pain. A younger child may not even be able to localize the pain.

Differential Diagnosis

The differential diagnosis changes with the age, history and physical examination of the patient.

In infancy and toddlerhood (see also childhood and adolescence)

Transient synovitis

Septic arthritis/osteomyelitis

Hypermobility

Diskitis

Trauma

Child Abuse

Neoplasia (including leukemias and metastatic disease)

Juvenile rheumatoid arthritis

Referred pain

Rubella

In childhood (see also infancy and toddlerhood and adolescence)

Sickle cell pain crisis

Neoplasia (including primary bone tumors)

Legg-Calve-Perthes Disease

Serum sickness

Henoch-Schonlein purpura

Collagen vascular diseases (SLE, dermatomyositis, sarcoid)

Rheumatic fever

Drugs

Porphyria

Caffey's Disease

Spondyloarthropathy

Psychological/Behavioral

Non-specific limb pain such as "growing pains"

Abdominal abscess

In adolescence (see also infancy and toddlerhood and childhood)
Slipped capital femoral epiphysis (SCFE)
Osgood-Schlatter disease
Sexually transmitted diseases (Syphilis, Neisseria gonorrhea)
Typhoid fever
Inflammatory Bowel Disease
Osteochondritis

History and Physical
History should include onset of the symptoms, severity, intermittent or constant pain, and associated symptoms such as limp, refusal to bear weight, fever and rash. A history of preceding upper respiratory infections or trauma (especially minor trauma such as a toddler fall or even new shoes that have rubbed the feet). A close physical examination of the entire affected limb and proximal areas to the affected site (looking for sources of referred pain) such as the shoulder, neck, lower abdomen, pelvis and spine is important. Inspection for swelling and erythema should be done with palpation of muscle and bone and notation of localized heat. Additionally, range of motion of all joints should be noted. A neuromuscular examination including gait should be assessed. A general physical examination for signs of systemic infection is also indicated.

Evaluation
The laboratory evaluation could be quite extensive but should be guided the clinical situation and differential diagnoses being entertained. Tests to consider are:

Blood
CBC, Differential, Platelet - for infections, malignancy
Blood culture - for bacteremia
ESR - for evidence of inflammation

Imaging
Extremity radiographs - for trauma, primary malignancy
Computed tomography - for better delineation of a bone or soft tissue lesion

Other
ANA, Rheumatoid Factor - for connective tissue diseases

Total Protein, albumin - for inflammatory bowel disease, neoplasia
Alkaline Phosphatase, uric acid - for neoplasia
Urethral and cervical cultures - for Neisseria gonorrhea
RPR - for syphilis

Consultation
Orthopaedic Surgery for possible surgical management

Treatment
Most children usually have a self-limited, localized disease process such as transient synovitis or trauma. These can be treated with conservative management including rest, limited immobilization, thermotherapy, and pain relief. More complicated orthopaedic disease such as Legg-Perthes, and SCFE need orthopaedic management. If an infectious disease is suspected, appropriate antibiotics should be administered. Systemic diseases such as connective tissue disease, inflammatory bowel disease, and neoplasias require a team approach to the evaluation and management.

A 20-year-old man has had an 8-year history of recurrent episodes of loss of conscious activity that last for seconds to several minutes. Sometimes he has as many as 100 of these lapses. The patient regains awareness of his environment very quickly. There is no major motor manifestation during the episodes or a period of confusion afterward. The patient's neurologic examination is totally normal. Which of the following drugs would be the most effective for this patient's problem?

A Phenytoin
B Carbamazepine
C Phenobarbital
D Ethosuximide
E Primidone

The answer is D

Different types of seizures respond better to certain classes of anticonvulsant drugs. For example, generalized tonic-clonic seizures may be treated successfully with phenytoin, carbamazepine, phenobarbital, or valproic acid. Carbamazepine and phenytoin also are effective for the treatment of partial seizures, though persons with complex partial seizures may require more than one type of drug at a time. Partial absence seizures, such as those described in the question, are best treated with ethosuximide or valproic acid, although clonazepam (a benzodiazepine) also may be effective. The side effects of ethosuximide include ataxia, lethargy, GI irritation, skin rash, and bone marrow suppression

A 50-year-old man on rare occasions develops dysphagia after eating steak. He remains asymptomatic between episodes with the symptom-free intervals sometimes lasting several years. Which entity is associated with this clinical situation?

a. Schatzki ring
b. Barrett's esophagus
c. History of lye ingestion at age 14
d. Achalasia
e. Scleroderma

The correct answer is a.

a. Achalasia is associated with dysphagia or regurgitation of food at night when recumbent. The food lies in the esophagus due to a high pressure of the lower esophageal sphincter, which fails to relax. There is absent peristalsis. It may also lead to an increased incidence of squamous cell carcinoma. Dysphagia may be due to

abnormalities of peristalsis in the body of the esophagus, or disordered functioning of the lower esophageal sphincter or the upper esophageal sphincter (cricopharyngeus) or pharyngeal muscles. Patients with a Schatzki ring usually have occasional episodes of dysphagia, especially if large pieces of meat are not adequately chewed. Barrett's esophagus is columnar mucosa, which occurs in patients with severe gastroesophageal reflux and frequently is associated with benign peptic strictures. It may develop into adenocarcinoma after a period of time, but it is not associated with squamous cell carcinoma of the esophagus.
Scleroderma may lead to severe heartburn because of both a low esophageal sphincter pressure and an ineffective to absent peristalsis in approximately the lower two-thirds of the esophagus. A history of lye ingestion may be associated with a stricture, which causes dysphagia and may lead to the development of squamous cell carcinoma, which interferes with swallowing one's own saliva when it almost totally occludes the lumen.

A geriatric patient with osteoporosis, poor wound healing, diabetes mellitus may be having an adverse reaction to which drug?

a. Anticholinergic
b. Digoxin
c. Diuretic
d. Corticosteroid
e. Aminoglycoside

D

d. Anticholinergic drugs can worsen glaucoma and cause constipation and urinary retention, especially in elderly patients. Digoxin causes gastrointestinal adverse effects such as nausea and vomiting and anorexia. Digoxin toxicity can also cause arrhythmias and heart block. Diuretics can cause dehydration, hypokalemia, and hyponatremia. Corticosteroids can cause osteoporosis if given on a long-term basis. They also impair wound healing and precipitate or exacerbate diabetes mellitus. The aminoglycosides primarily cause renal and ototoxicity, including tinnitus and deafness.

Which statement regarding spontaneous bacterial peritonitis (SBP) is true?

a. It develops when bacteria pass directly through the bowel wall into the peritoneum.
b. It can develop in a cirrhotic patient without ascites.
c. It is treated with a combination of an aminoglycoside and ampicillin.
d. An elevated ascitic fluid polymorphonuclear leukocyte count of 250/mm3 or greater is consistent with the diagnosis.
e. Patients with SBP always have abdominal pain.

D

according to the washington manual,
SBP occurs only in patient with preexisting ascites.
the disease may be present in the absence of specific
clinical sx.
dx. - PMN >250/microliter or positive culture
tx. - 3rd generation cepha.(cefotaxime) for 5-7days
AMG should be avoided due to renal failure
norfloxacin 400mg po qd reduces SBP recurrence, but does not improve survival

Screening for M. tuberculosis

Target groups and technique:
Tuberculin skin testing is performed to ascertain who is at high risk of latent infection with M. tuberculosis and who would benefit from therapy to prevent reactivation.

Current recommendations suggest that the following groups be screened:
persons with HIV infection, close contacts of persons with infectious TB, persons with immunocompromising medical conditions, users of injected drugs, foreign-born persons from areas where TB is common, homeless persons, low-income populations, and residents or workers in congregate settings, such as correctional institutions, nursing homes, and mental institutions.

The Mantoux tuberculin skin test with 5 units of purified protein derivative (PPD) is the standard method. The PPD is placed subcutaneously into the volar aspect of the forearm, and the result is interpreted 48 to 72 hours later. A positive reaction is determined by the size of the induration (not erythema) in millimeters and varies depending on risk category. A two-step test, which consists of a second test 1 to 3 weeks after an initially negative test result, is more sensitive, because it may detect cases of latent infection in which the initial immune response is muted but becomes evident owing to a booster phenomenon.

Therapy for latent infection: Persons with a positive tuberculin skin test result should undergo chest radiography and clinical evaluation to exclude active disease. If the findings are normal, latent infection is likely. The decision to treat patients for latent infection depends on the person's circumstances.

Treatment is recommended, regardless of age, for the following groups:
those who are known or are likely to have HIV infection, close contacts of a person with TB, persons who inject drugs, persons with skin test results that have recently (within 2 years) converted, persons with certain medical conditions (such as diabetes mellitus, chronic renal failure, an organ transplant, hematologic malignant disease, ongoing use of glucocorticoids, and prior gastrectomy), and those who have chest radiographic findings that suggest prior active TB but have not received adequate antituberculous therapy.

The following groups should be treated only if younger than 35 years:
foreign-born persons from areas where TB is common; medically underserved, low-income populations; and homeless persons.

A 9-month course of daily INH therapy is now thought to be the most effective regimen for eradication of latent TB infection. For persons with conditions in which neuropathy is common, such as diabetes, uremia, alcoholism, and HIV infection, pyridoxine also should be administered.

Cellulitis

Definitions

Cellulitis is a spreading acute infection of the skin and subcutaneous tissues characterized by erythema, warmth, swelling, and tenderness. It may be classified as mild and uncomplicated, severe, high risk, or necrotizing.

Etiology and Clinical Features

Most cases of cellulitis are mild and uncomplicated. They are caused by group A streptococci or Staphylococcus aureus. Diffuse erythema, swelling, and tenderness develop over 2 to 4 days. In an extremity, a red line along the course of lymphatic vessels indicates accompanying lymphangitis. Enlargement and tenderness of regional lymph nodes are common. Fever, malaise, and chills often are present.

Orbital cellulitis is a rare complication of sinusitis and carries a risk of blindness, brain abscess, and meningitis. Erysipelas usually follows a streptococcal sore throat and usually affects the young and the elderly. The infection involves the dermis and the lymphatic vessels and manifests as pain and bright-red peau d'orange lesions with advancing red borders that are sharply demarcated from normal skin. Erysipeloid is a form of cellulitis that occurs among workers who handle fish, meat, and poultry. It is caused by the gram-positive bacillus Erysipelothrix rhusiopathiae. About 1 week after a minor injury to the hand, a violaceous painful area appears. As the central area clears, the lesion spreads outward with distinct raised borders. Animal and human bites of the hands are potentially dangerous because of tissue damage and secondary infection. Pasteurella multocida often infects dog and cat bites, and Eikenella corrodens often is implicated in human bites. Deep infections such as tenosynovitis are particularly common after human bites. Necrotizing cellulitis is a serious gangrenous soft-tissue infection

often associated with the presence of anaerobic bacteria, tissue toxins, and bacterial synergy. It should be suspected when a patient has edema out of proportion to erythema, skin vesicles, crepitus on palpation or air in the tissues on a radiograph, local anesthesia, or patchy gangrene of the skin.

Management

Most cases of cellulitis can be managed simply on an outpatient basis. Severe, complicated, or high-risk infections necessitate aggressive inpatient antibiotic therapy and often surgery. Patients with necrotizing infections must be treated surgically. Uncomplicated mild cellulitis, commonly caused by Streptococcus pyogenes or S. aureus, responds well to oral cloxacillin or cephalexin (500 mg every 6 hours for 7 to 10 days). For patients allergic to penicillin, erythromycin (500 mg every 6 hours for 7 to 10 days) is an alternative. Local therapy includes cleansing the area and resting the extremity. In severe cellulitis, treatment should start with intravenous cloxacillin (1 g every 6 hours). Intravenous vancomycin (500 mg every 8 hours if renal function is normal) and teicoplanin (1 g daily) are alternatives for patients allergic to penicillin. An aminoglycoside may be added when the clinical setting suggests that gram-negative bacilli may play a role (e.g., perianal cellulitis, neutropenia, glucocorticoid therapy, and diabetes mellitus), although monotherapy with second- or third-generation cephalosporins is an alternative in these situations.

Erysipelas usually responds to intravenous penicillin G (1 million units every 6 hours). Orbital cellulitis is managed with broad-spectrum antibiotics. Computed tomographic evidence of an abscess or intracranial involvement and failure to respond to antibiotics within 48 hours are indications for prompt exploration and decompression of the orbit. Erysipeloid responds to amoxicillin–clavulanate or erythromycin. Animal and human bites necessitate therapy with oral amoxicilin-clavulanate and local debridement.

liver function tests

While liver function tests are frequently nonspecific, in certain situations they may be characteristic or lead one to consider certain groups of disorders. An isolated hyperbilirubinemia usually suggests a hereditary syndrome. If the elevation is primarily conjugated, Dubin–Johnson or Rotor's syndrome come to mind. If primarily unconjugated, Gilbert's is likely in an adult. However, with a hemolytic anemia one may also have an

unconjugated hyperbilirubinemia. In Gilbert's the lactate dehydrogenase (LDH) should not be elevated, but in hemolysis sufficient to cause hyperbilirubinemia the LDH is frequently abnormal.
In patients with intrahepatic cholestasis or extrahepatic obstruction, there is a pattern of a significantly elevated alkaline phosphatase and gamma glutamyl transpeptidase. Patients with primary biliary cirrhosis present initially with these findings, with bilirubin elevation (usually mild) occurring only late in the disease. Antimitochondrial antibodies are almost always positive. Though the total bilirubin rises only slightly most of it is conjugated as reflected in the direct reacting fraction. Patients with chronic liver disease frequently have low serum albumin, high serum globulin, and may have elevated prothrombin times, especially if their liver function is poor.

Alcohol abusers with or without concomitant cocaine abuse and/or trauma may present with rhabdomyolysis, which may be reflected in an elevated creatine phosphokinase (CPK), LDH, and possibly AST.

Patients who present with relatively recent onset of jaundice without antecedent history of liver disease and who deteriorate clinically may be developing fulminant hepatic failure. Clinically the bilirubin rises, the PT INR rises markedly, and the patient's mental status deteriorates. The albumin also tends to become lower and the globulins rise.

Patients with metastatic liver disease generally exhibit an elevated alkaline phosphatase and ã-glutamyl transpeptidase (GGT). This pattern is seen in other infiltrating diseases as with granulomas in tuberculosis and sarcoidosis and may be noted in incomplete biliary obstruction.

Patients with cholelithiasis may pass a stone into the common duct, thereby causing obstruction. When the obstruction is complete, an ascending cholangitis may present with the classical Charcot's triad of marked jaundice, fever, and right upper quadrant pain. When the obstruction is relatively acute, the prothrombin time should be near normal. There may be elevations of the AST and ALT as well as the prominent elevations of the alkaline phosphatase and GGT, which, as noted above, are the hallmarks of cholestasis. An elevated alkaline phosphatase with a normal GGT suggests a cause other than liver disease, such as bone pathology, pregnancy, or a growing teenager.

Acute viral hepatitis, which is not fulminant, may present with or without jaundice. Frequently the enzymes are markedly elevated into the thousand range.

Nipple discharge - serous, serosanguinous, bloody

ibrocystic breast disease
mammary duct ectasia
intraductal papilloma
epithelial hyperplasia
epithelial hyperplasia of pregnancy
cancer or benign breast tumors

Background

A serous or yellowish discharge is fairly common if patients have fibrocystic changes of the breast. Any blood-tinged (serosanguineous) or bloody discharge often indicates an intraductal papilloma or a malignancy of the breast. While very worrisome for malignancy, bloody nipple discharge is actually most likely to be due to a benign process.

Goals

After a thorough exam, a mammogram should be included to rule out underlying malignancy that is undetectable by physical exam. Any bloody nipple discharge needs surgical investigation even if the exam and the mammogram are negative.

Mrs. Grey is a friend from church who confides in you about a problem she has with leaking of urine. She is 65 years old and has 4 children, married and living nearby. Her husband died last year and she put off seeing a physician because of medical care duties involving her husband. The urine leakage problem has been present for over 5 years and is worse with any lifting, coughing or sneezing. She gets an urge to go to urinate and often leaks urine before she gets to the toilet.
Her medical health is good except for long standing diabetes (15 years) which is under control with oral pills. She has not taken estrogen replacement therapy because she didn't have any hot flashes when she underwent menopause.

In order to cure or improve the urine loss it must be determined what is the cause of her problem. Which of the following statements is correct about the diagnosis of urinary incontinence?

bladder spasms (detrusor instability) can be diagnosed by symptoms alone
interstitial cystitis is a cause of stress incontinence
mixed incontinence decreases as age increases
stress incontinence is diagnosed by observing urinary leakage with straining
a urinalysis is used to diagnose overflow incontinence

CORECT

Stress incontinence is diagnosed by observing urine leakage with coughing or straining. It is almost always associated with urethrovesical neck hypermobility (bladder/urethra dropping). This is visually confirmed by a Q-tip test in which a sterile Q-tip is placed inside the urethra and as a woman strains, the end of the Q-tip rises more than 30 degrees. If this is present, surgery is often needed (bladder "tack") if pelvic muscle exercises fail to cure the loss. If hypermobility is not present, different treatment is necessary. There may be an intrinsic weakness of the urethral sphincter muscle.

A 33-year-old man is referred to you for an examination for medical clearance for an elective cholecystectomy. He has a history of non-insulin-dependent diabetes mellitus and suffered three fractured ribs in a motor vehicle accident 5 years ago. He is a smoker with a 15-pack/year history. He has a mild nonproductive cough and otherwise is asymptomatic. His physical examination is essentially normal. A preoperative chest radiograph reveals a left lower lung zone solitary nodule measuring approximately 1.5 cm in diameter.
Your next step in managing this patient should be

a. Sputum examination for cytology
b. Elective resection of the nodule

c. Review previous chest radiographs

d. Fiberoptic bronchoscopy

e. Computerized tomography (CT) scan of the chest

C

1. review with old x-ray(most important)
   no change in last 2years-benign, chest x-ray F/U
   new or growing lesion- Bx. resection
   2. if no old x-ray, no characteristic calcification
   nonsmoker,<35yo-chest x-ray F/U(q3months for 1year, and then per 1year)
   smoker,>35yo-Bx.(PCNA or open lung Bx.)

   SPN suggesting malignancy
   1.male,>45yo
   2.smoker
   3.size>2cm
   4.indistinct,spiculated margin or lobulated shape
   5.no calcification
   6.with chest sx. atelectasis,pneumonitis,adenopathy

compare the previous xray(s) with the current xray and see if there is any change in the size of the lesion.If it has not changed then proceed with the surgery.The lesion is probably benign.

Cushing's Syndrome

Cushing's syndrome (the clinical effects of increased glucocorticoid hormone) is most often iatrogenic, due to therapy with glucocorticoid drugs. ACTH-secreting pituitary microadenomas (Cushing's disease) account for 80% of cases of endogenous Cushing's syndrome. Adrenal tumors and ectopic ACTH secretion account for the remainder.

I. Clinical findings include truncal obesity, rounded face, fat deposits in the supraclavicular fossae and over the posterior neck, hypertension, hirsutism, amenorrhea, and depression. More specific findings include thin skin, easy bruising, reddish striae, proximal muscle weakness, and osteoporosis. Diabetes mellitus develops in some patients. Hyperpigmentation or hypokalemic alkalosis suggests Cushing's syndrome due to ectopic ACTH secretion.

II. Diagnosis is based on increased cortisol excretion and lack of normal feedback inhibition of ACTH and cortisol secretion.

A. The overnight dexamethasone suppression test (1 mg dexamethasone given PO at 11:00 PM; plasma cortisol measured at 8:00 AM the next day; normal plasma cortisol level <2 mg/dl) or 24-hour urine cortisol measurement can be done as a screening test. Both tests are very sensitive, and a normal value virtually excludes the diagnosis.

B. An abnormal screening test indicates the need to perform a low-dose dexamethasone suppression test. Dexamethasone, 0.5 mg PO q6h, is given for 48 hours, and urine cortisol is measured during the last 24 hours. Failure to suppress urine cortisol to less than the normal reference range is diagnostic of Cushing's syndrome. Testing should not be done during severe illness or depression, which may cause false-positive results. Phenytoin therapy also causes false-positive dexamethasone suppression test results by accelerating metabolism of dexamethasone. Random plasma cortisol levels are not useful for diagnosis, because the wide range of normal values overlaps those of Cushing's syndrome. After the diagnosis of Cushing's syndrome is made, tests to determine the cause are best done in consultation with an endocrinologist.

Glaucoma

Glaucoma is characterized by progressive visual field loss caused by nerve damage from increased intraocular pressure.

A. Open-angle glaucoma is the most common form of glaucoma and is caused by a malfunction of the trabecular meshwork despite normal angle structures by gonioscopic examination. It is asymptomatic, and the etiology is multifactorial. Risk factors associated with an increased tendency toward the development of open-angle glaucoma include a family history of the disease, age, black race, diabetes, hypertension, and myopia. Treatment includes topical cholinergic or adrenergic agonists, b-adrenergic antagonists, topical carbonic anhydrase inhibitors (brinzolamide, dorzolamide), and topical prostaglandin inhibitors (latanoprost). Systemic carbonic anhydrase inhibitors can be added if topical agents do not reduce intraocular pressure adequately.

B. Angle-closure glaucoma results from obstruction of the outflow of aqueous humor through the trabecular meshwork. Common signs include conjunctival hyperemia, corneal edema, and a fixed middilated pupil. An acute rise in pressure may result in pupil dilatation; eye or face pain, or both; nausea; vomiting; loss of visual acuity; and/or seeing colored halos around lights. An acute angle-closure attack should be treated promptly in coordination with an ophthalmologist. Therapeutic agents include acetazolamide, 250 mg PO or IV; 0.05% timolol, 1 gtt bid; and 0.5% apraclonidine, 1 gtt bid, in addition to other topicals. Ophthalmologic referral for mild cases is necessary within 12 hours.

Evaluation and management of the comatose patient

1. The initial steps are to control airway and ventilation, administer oxygen, maintain body temperature, and monitor vital signs, including oximetry and continuous ECG.

   2. If trauma has or may have occurred, immobilization of the spine, especially cervical, should be done immediately with a hard collar until radiographs exclude fracture or instability.

3. An IV line should be secured, and adequate circulation should be established. Initial laboratory evaluation should include blood for glucose, electrolytes, BUN, CBC, calcium, ABG, cultures, liver enzymes, ammonia, prothrombin time (PT)/activated partial thromboplastin time (PTT), and blood type and screen. Blood and urine should be sent for toxicologic/drug analysis. A urinalysis should be performed.

4. IV thiamine (100 mg), followed by dextrose, (50 ml 50% dextrose in water = 25 g dextrose) should be administered.

5. IV naloxone (opiate antagonist), 0.01 mg/kg, should be administered if opiate intoxication is suspected (coma, respiratory depression, small reactive pupils). Naloxone may provoke opiate withdrawal syndrome in addicted patients. Flumazenil (benzodiazepine antagonist), 0.2 mg IV, may reverse benzodiazepine intoxication, but its duration of action is short. Flumazenil can cause seizures.

6. The initial assessment should focus on a history of trauma, seizures, medications, alcohol or drug use, and existing medical conditions. The general physical examination may reveal a systemic illness associated with coma (e.g., cirrhosis, hemodialysis shunt, rash of meningococcemia) or signs of head trauma (e.g., lacerations, periorbital or mastoid ecchymosis, hemotympanum). The neurologic examination should localize structural lesions and diagnose brain herniation. Serial examinations should be performed to detect and intervene if clinical deterioration occurs.

7. Herniation must be recognized and treated immediately. Treatment consists of measures to lower intracranial pressure while surgically treatable etiologies are identified or excluded:
a. Hyperventilation [carbon dioxide tension (PCO2), 25–30 mm Hg] reduces intracranial pressure by cerebral vasoconstriction, usually within minutes. Reduction of PCO2 below 25 mm Hg is not recommended because it may reduce cerebral blood flow excessively.
b. Administration of mannitol IV, 1–2 g/kg over 10–20 minutes, osmotically reduces brain free water via the kidneys. The effect peaks at 90 minutes.
c. Dexamethasone , 10 mg IV, followed by 4 mg IV q6h, reduces the edema surrounding a tumor or abscess.

8. As soon as the patient's condition is stable, a head CT scan should be obtained to distinguish operable lesions (e.g., cerebellar hematoma) from inoperable lesions (e.g., pontine hemorrhage). Coagulopathy

should be corrected if intracranial hemorrhage is diagnosed and before surgical treatment or invasive procedures (e.g., lumbar puncture) are performed. Each patient's circumstance should be carefully assessed before therapeutic anticoagulation is reversed.

9. Lumbar puncture is indicated whenever CNS infection is considered and when subarachnoid hemorrhage (SAH) is clinically suspected but not confirmed by neuroimaging. One should not perform lumbar puncture if a mass lesion or midline shift is present on CT scan. In such cases, if CNS infection is suspected, appropriate broad-spectrum antibiotics and acyclovir should be administered without lumbar puncture. If cerebrospinal fluid (CSF) is obtained, it should be sent for cell count, protein, glucose, Gram stain, herpes simplex virus polymerase chain reaction, acid-fast stain, India ink stain, fungal and bacterial cultures, cryptococcal antigen, and bacterial antigens (particularly if antibiotics have been given). If possible, extra CSF should be saved and refrigerated.

10. Electroencephalogram (EEG) is helpful in the diagnosis of subclinical electrical seizures (nonconvulsive status epilepticus). Some conditions have characteristic (not necessarily diagnostic) EEG findings, including hepatic encephalopathy, herpes simplex virus encephalitis, and barbiturate or other sedative intoxications.

11. If the initial evaluation yields no diagnosis, a metabolic or toxic etiology is most likely. The patient should be admitted to an ICU with continued supportive care while additional diagnostic studies are pursued.

A 36 year old woman all of a sudden has some acute pain on the left side of her lower abdomen. She holds her side and has to sit down because of the pain. She is 36 years old and has two children. She had a tubal ligation at age 30. Her last menstrual period was 3 weeks ago and her menses have been regular each month with 4-5 days of menstrual flow. She has had an increasing amount of menstrual cramps in the last several years.
Of the following, which one do you think is the most likely cause of her pain?

A: acute appendicitis
B: bleeding ectopic pregnancy

C: ruptured or bleeding ovarian cyst
D: acute pelvic infection
E: torsion of ovary or fallopian tube

Answer is C.
Ovarian cysts are the most common cause of sudden onset of pelvic pain in reproductive age women. They result from the normal process of follicle development or ovulation which has somehow failed to undergo its usual course. Follicles that do not develop into the main egg for ovulation that month usually just dissolve. The cyst that forms after the egg ovulates (corpus luteum) also usually dissolves when menses starts. If either of these two "dissolving" processes fails to take place, a persistent cyst of the ovary may result.
Acute pain results either because of the pressure of a fluid-filled cyst or because of cyst rupture or bleeding. Frequently, physical activity will cause the rupture or bleeding.

this pt. had her Lmp 3 weeks ago.estrogen peaks around this time making ovarian cyst grow bigger and bigger.this cycle has been on going for some time until the cyst ruptured during this cycle.
on the other hand, I dont know the statistics if tubal ligation is associated with torsion of the ovary.
appy is not possible looking at the history.The same can be said of pid and ectopic rupture(LMP 3WEEKS AGO).

Treatment of Gallstones in Adults Revised 2001

RECOMMENDATION 1: Asymptomatic gallstones
Surgical consultation and surgery are not recommended for adults who have asymptomatic gallstones, found incidentally by diagnostic imaging or abdominal surgery.

RECCOMENDATION 2: Symptomatic gallstones
a) Surgical Intervention
If a patient with symptomatic gallstones puts a relatively high value on preventing recurrent pain

then surgical removal of the gallbladder may be considered. About 70 per cent of patients will experience the recurrence of gallstone-related pain if left surgically untreated. Laparoscopic cholecystectomy is recommended in symptomatic patients who are suitable candidates for surgery and who wish to have surgical intervention.

b) Non-surgical Management

(i) Oral bile acids are rarely indicated for dissolution therapy in patients who are unsuitable for or who decline surgery.

(ii) Lithotripsy is not indicated for the primary treatment of simple gallstone disease.

Most gallstones are asymptomatic and remain so for the life of the patient.Complications or symptoms will develop in one to two per cent of patients per year. It also appears that the longer the stones remain quiescent, the less likely are complications to appear. Surgery is not indicated in asymptomatic patients.Some exceptions include patients with sickle cell disease and gallstones, and patients with calcified ("porcelain") gallbladders where the risk of gallbladder cancer is very high. Prophylactic cholecystectomy had previously been recommended in diabetic patients in order to avoid the high morbidity and mortality rates associated with emergency operations. However, the increased risks are due to cardiovascular disease and other comorbid conditions which are present whether the surgery is elective or emergency. Therefore, asymptomatic patients with diabetes should not have prophylactic surgery.

Laparoscopic cholecystectomy is now the standard approach to the treatment of symptomatic gallstones.

A 28-year-old woman with borderline personality disorder has been stable on fluoxetine and lithium carbonate for the past year and is adherent with psychotherapy. She now wishes to become pregnant. Which of the following actions by her psychiatrist is most appropriate?

a. Continue fluoxetine but discontinue lithium until after the first trimester.

b. Discontinue both lithium and fluoxetine.

c. Maintain both lithium and fluoxetine at current doses.

d. Review risks and benefits of possible treatment options with the patient.
e. Tell the patient that pregnancy is too risky at this point in her treatment.

D

Antidepressants, anticonvulsants, and short-term use of neuroleptics are common for BPD. Decisions about medication use should be made cooperatively between the individual and the psychiatrist. Issues to be considered include the person's willingness to take the medication as prescribed, and the possible benefits, risks, and side effects of the medication, particularly the risk of overdose.

A patient sees a psychiatrist for frequent shifts in mood and difficulties in interpersonal relationships. After a complete evaluation, a diagnosis of borderline
personality disorder is made and the psychiatrist discusses a plan of treatment with the patient. The psychiatrist recommends extended outpatient psychotherapy,but the patient is concerned about the costs of care. Which of the following responses by the psychiatrist is most appropriate?

a. If cost is an issue, meeting intermittently for therapy will be less expensive even if occasional hospitalizations are needed.
b. Surprisingly, this kind of therapy is cheaper than being seen for medication management alone.
c. There is good evidence that this kind of therapy is often effective for your disorder; briefer treatment may not

work.
d. This kind of therapy is prohibitively expensive, but your insurance plan should cover most of the cost.

Answer is C. A combination of psychotherapy and medication appears to provide the best results for treatment of BPD. Medications can be useful in reducing anxiety, depression, and disruptive impulses. Relief of such symptoms may help the individual deal with harmful patterns of thinking and interacting that disrupt daily activities.
However, medications do not correct ingrained character difficulties. Long-term outpatient psychotherapy and group therapy (if the individual is carefully matched to the group) can be helpful.

DSM-IV-TR incorporated changes from DSM-IV in diagnostic criteria for the following:

Tourette's Disorder

Dementia of the Alzheimer's Type; Dementia Due to Other General Medical Conditions

Personality Change Due to a General Medical Condition

Exhibitionism; Frotteurism; Pedophilia; Sexual Sadism; Voyeurism

When a sexually-transmitted disease (STD) is suspected as a possible cause of symptoms associated with UTI, a good antibiotic choice is

a. A fluoroquinolone antibiotic because they are effective treatment for coliform bacteria, gonococci, and Chlamydia.

b. TMP/SMX because it is effective treatment for coliform bacteria.

c. Doxycycline because it is an effective treatment for Chlamydia, which is a very common cause of STD.

d. Ampicillin plus gentamicin to ensure clinical cure.

Answer is A. Quinolones make sense, because we know they are very effective at treating the UTI. And also, at least most of the quinolones that we use, Cipro is not that great against Chlamydia, but the other ones that we're generally using will basically treat all of these.

Which of the following diagnostic tests should be given to a patient who presents for the first time with dysphagia?

a. Barium esophagram

b. Histologic staining

c. 24-hour esophageal pH monitoring

d. None of the above

Answer is A. Use barium esophagram only in those patients who present for the first time with dysphagia. It helps us to give further information about the cause of their dysphagia. It serves as a road map before the gastroenterologist decides what kind of procedure to embark on.

Endoscopy should be indicated in patients who present for the first time with alarm symptoms, for example, dysphagia, odynophagia, anorexia, or weight loss. These are all ominous symptoms that may suggest that there is a mechanical obstruction, and there might be a lesion in the esophagus that needs to be further addressed. Also, we should consider endoscopy when we would like to exclude Barrett's esophagus.

When we should do endoscopy in these patients is unclear and remains an area of intense controversy. But recent American College of Gastroenterology practice guidelines suggest that patients who had symptoms of heartburn and acid regurgitation for at least 5 years should be endoscoped at least once to exclude Barrett's esophagus.

Twenty-four hour esophageal pH monitoring should be considered in patients who failed standard-dose PPI treatment. I would consider doing it on medication only to see if the PPI suppressed their acid properly.

In addition, some of the patients who have no documentation of EE prior to antireflux surgery should have a 24-hour esophageal pH monitoring done to demonstrate abnormal acid exposure.

Which of the following is NOT a contraindication to PTCA?

a. Left main disease
b. Presence of a single lesion
c. Chronic occlusions
d. Diabetes

B

Indications for PTCA have not changed significantly since its inception. Success and complication rates, however, have significantly improved. The method is still best applied to single vessel disease.

Which of the following is standard-of-care for acute asthma?

a. Aerosolized corticosteroids
b. Intravenous corticosteroids
c. Aerosolized beta-agonists
d. Oral beta-agonists

Answer is C. Aerosolized beta-agonists are now standard-of-care for acute asthma. Approximately two thirds of patients with acute asthma respond to treatment with nebulized albuterol sufficiently for discharge from the hospital.

MINOR : Decision-Making Capacity

The definition of emancipated minor varies somewhat from state to state. Generally, legislation defines emancipated minors as those who have graduated from high school, members of the armed forces, those who are married, those who are pregnant or parents, or those who live apart and are financially independent from their parents.

The legal notion of mature minor varies even more. Many courts and some legislatures recognize that individual children, beginning at approximately age 14 years, may be assessed sufficiently mature to make decisions, including some medical ones, for themselves.

Prophylaxis for PCP for all infants born to HIV-infected women should be initiated at:

A. immediately after confirming that infants is HIV positive
B. at 4 to 6 weeks of age, regardless of the infant's HIV status
C. at 1 to 3 weeks of age, regardless of the infant's
HIV status
D. depends on CD-4 counts
E. Prophylaxis for PCP is not reccomended at all during first year

B

Initiating PCP Prophylaxis for HIV-Exposed Infants

Prophylaxis for PCP for all infants born to HIV-infected women should be initiated at 4 to 6 weeks of age, regardless of the infant's CD4+ lymphocyte count. Infants who are first identified as being HIV-exposed after 6 weeks of age should begin prophylaxis at the time of identification. These recommendations are based on the following: (1) most cases of PCP among HIV-infected children occur during the first year of life; (2) the risk for PCP begins to increase dramatically at 2 months of age (when HIV infection cannot yet be reasonably excluded ; and (3) the reliability of CD4[+] lymphocyte counts in predicting risk for PCP is relatively low during infancy, particularly among infants 6 months of age or younger, the age at which the peak incidence of PCP occurs.

Prophylaxis for PCP should not be administered to infants younger than 4 weeks of age because they are at low risk for PCP and the use of sulfa drugs among infants at this age is not advised because immature bilirubin metabolism may result in adverse drug effects. Additionally, the concurrent use of sulfa drugs among infants receiving zidovudine during the first 6 weeks of life to prevent perinatal HIV transmission could exacerbate the anemia that some infants receiving zidovudine experience. Therefore, to avoid the potential for adverse drug reactions in infants receiving zidovudine, prophylaxis against PCP should be started at 6 weeks of age, the age at which zidovudine is discontinued.

Ref: AMERICAN ACADEMY OF PEDIATRICS

P. carinii pneumonia occurs most often at three to six months of age, an age when infection has not yet become apparent in many HIV-exposed infants.
Prophylaxis should be initiated at four to six weeks of age in all infants born to HIV-infected women.

Mr. B is a 75-year-old male with Parkinson's disorder and depression. For 4 years, he was put on Paxil, that caused him to be delirious and didn't help much. He has decreased energy, but sleeps well and has a good

appetite. The Anti Depressant of choice would be:

1) Prozac

2) Wellbutrin (Bupropion)

3) Increase the dose of Paxil

4) Nardil (MAO inhibitor)

5) Serzone

Serzone (generic name nefazodone hydrochloride) was approved by the FDA for use in the United States for the treatment of depression in 1994. It has been prescribed in Europe for over 15 years with no long term side effects reported thus far.

An anti-depressant in a class of its own in terms of its structure and composition, Serzone shares some characteristics with other serotonin uptake inhibitors like Prozac, Paxil and Zoloft. It is most often used to treat a specific form of depression without some of the side effects so commonly experienced by users of other similar drugs.

Unlike other anti-depressants Serzone does not cause weight gain in the majority of users, although it can increase appetite. While Zoloft and Prozac can often cause insomnia, tiredness, restlessness and loss of libido, Serzone has the opposite effect and does not aggravate existing sleep problems; indeed it often encourages and supports better sleep patterns. Likewise, Serzone is not associated with a decrease in libido or sexual functioning.

Match the following statement with the appropriate response: Small cell carcinoma of the lung

a. TNM staging closely correlates with survival.
b. Most patients present with early stage disease.
c. Immunohistochemistry plays a limited role in the diagnosis.
d. Paraneoplastic syndromes seldom occur in patients with small cell carcinoma of the lung.
e. Represents 20% of all lung cancers.

E

SCLC
-common paraneoplastic syndrome
-small, dark-staining cells with little cytoplasm
-rapid growth, early meta.(chemotherapy first)

Germ cell malignancies in men and women share certain clinical characteristics. Current therapy has significantly improved the prognosis. All of the following statements about germ cell malignancies are true except:

a. Seminomas typically present with localized disease and negative serum markers; they exhibit an excellent response to radiation therapy.
b. Elevation of á-fetoprotein (AFP) or human chorionic gonadotropin (HCG) in a patient whose tumor appears to be pure seminoma suggests undetected nonseminomatous tumor and more advanced stage, which impacts on future treatment recommendations.
c. Hydatidiform mole may be differentiated from choriocarcinoma by greater elevation of HCG and absence of a 46 XX androgenic genotype.
d. Malignant trophoblastic disease must be included in the differential diagnosis of any woman of childbearing age who presents with unexplained stroke, intraperitoneal hemorrhage, or pulmonary metastases. Diagnosis is

confirmed by elevation of serum HCG in the absence of pregnancy.
e. Systemic chemotherapy in nonseminomatous tumors and malignant trophoblastic disease may result in dramatic reduction of HCG and eventual cure.

The correct answer is c.
c. Malignant trophoblastic disease may follow any type of pregnancy including ectopic gestations, term pregnancies, spontaneous or therapeutic abortions, or hydatidiform mole. More than half of these malignancies are diagnosed when serum HCG titers rise after the evacuation of a classic or complete hydatidiform mole, a benign trophoblastic neoplasm.

Select the most appropriate diagnosis for this clinical presentation: Peripheral anemia with marrow megaloblastic erythroid hyperplasia; 15% progression to acute leukemia.

a. Refractory anemia
b. Chronic myelomonocytic leukemia
c. Refractory anemia with ringed sideroblasts
d. Agnogenic myeloid metaplasia
e. MGUS

B

Myelodysplastic syndrome (MDS) refers to a heterogeneous group of closely related clonal hematopoietic disorders. All are characterized by a cellular marrow with impaired morphology and maturation (dysmyelopoiesis) and peripheral blood cytopenias, resulting from ineffective blood cell production.

Myelodysplastic Syndromes
Refractory Anemia (RA)
Refractory Anemia with Ringed Sideroblasts (RARS)
Refractory Anemia with Excess Blasts (RAEB)
Refractory Anemia with Excess Blasts in Transformation (RAEB-T)
Chronic Myelomonocytic Leukemia (CMML)

The average age at diagnosis is usually >60 years; less than 10% diagnosed before the age of 50 years.
MDS should not be diagnosed if there is evidence of either a B12 or folate deficiency. Remember megaloblastoid changes are often seen in the erythroid and megakaryocytic lines of MDS and are similar to abnormalities of megaloblastic anemia.

Chemotherapy, bone marrow transplantation, and hematopoietic growth factors (GM-CSF;G-CSF) are current options for treatment of MDS.

The theraputic goal is to eliminate the abnormal clonal population of cells and to replace it with normal hematopoietic elements.

The MDS transform to acute myeloid leukemia (AML) in about 30% of patients after various intervals from diagnosis, and at variable rates
RA-16%
RARS-15%
CMML-29%
RAEB-48%
RAEBT-62%

The acute leukemic transformation is much less responsive to chemotherapy than is de novo AML. Prognosis is also related to the type of myelodysplastic syndrome.

Megaloblastic erythroid hyperplasia with macrocytic anemia associated with normal B12 and folate levels is frequently observed. Circulating granulocytes are frequently severely reduced in number, often hypogranular, and display the acquired pseudo Pelger-Huet abnormality.

Which of the following statements about renal cancer is true?

a. It seldom occurs in patients under age 50.
b. It must be considered if an asymptomatic renal mass is demonstrated by an ultrasound.
c. It may metastasize to bone, lung, or brain only after local recurrence manifests.
d. It is exquisitely sensitive to chemotherapy.
e. It rarely exhibits a protracted latency between initial presentation and development of metastases.

B

a. Common in age 50 and 60.
   b. classic triad(hematuria, flank pain,abdominal mass)is only seen <10%
   c. metastasize to bone(49%), lung(50%), brain(3%),skin(11%) and liver(8%)

d.radical nephrectomy)localized RCC standard Tx.
chemotherapy-stage IV

Match the following statement with the appropriate response: Mesothelioma

a. Chemotherapy and radiation therapy offer no survival benefit.
b. Subtotal pleurectomy is often curative.
c. Women are affected five times more commonly than men.
d. The interval between asbestos exposure and tumor formation is under five years.
e. Immunohistochemistry plays no role in diagnosis.

A

Neither surgery, chemotherapy, nor radiation alone improves survival. Death usually occurs in 4-12 months due to complications of pneumonia or respiratory failure.
Many have a significant history of asbestos exposure 30-40 years prior to clinical presentation during the fifth through sixth decade of life. Men are three times more likely to have the disease than women. For obvious reasons, more men were involved in the high-risk occupations like mining, manufacturing, and ship construction.

All of the following statements regarding Hodgkin's disease are true except:

a. Sixty percent of patients have clinical Stage I or Stage II disease, potentially curable with radiation alone.
b. Pathologic cell type remains the most significant prognostic factor.
c. Staging laparotomy often represents the most effective method of detecting splenic or upper abdominal disease in clinical Stage I or Stage II patients.
d. If radiation therapy is not a treatment option for any reason, patients should not undergo staging laparotomy but should receive combination chemotherapy.
e. The risk of myocarditis and pericarditis is increased in patients receiving chest irradiation and doxorubicin.

The correct answer is b.
b. Patients with stage I or stage II disease remain potentially curable with radiation alone. The pathological cell type is not as important as the initial stage in overall prognosis.

Chemotherapy may be a curable treatment in all of the following situations except

a. Testicular cancer with metastases to the pelvis and lungs
b. Hodgkin's disease with bone marrow involvement
c. Diffuse large cell lymphoma
d. Metastatic melanoma to regional lymph nodes
e. Ewing's sarcomaChemotherapy may be a curable treatment in all of the following situations except

a. Testicular cancer with metastases to the pelvis and lungs
b. Hodgkin's disease with bone marrow involvement
c. Diffuse large cell lymphoma

d. Metastatic melanoma to regional lymph nodes

e. Ewing's sarcoma

D

e. Metastatic melanoma remains particularly resistant to systemic chemotherapy (as does hepatocellular cancer)..
   -curable by CTx.-
   ALL
   AML
   Ewing's sarcoma
   Hodgkin's lymphoma: burkitt's lymphoma, follicular
   mixed lymphoma,diffuse large cell lymphoma
   rhabdomyosarcoma
   testicular carcinoma
   wilms' tumor
   gestational trophoblastic carcinoma
   -CTx.has minor activity-
   melanoma, brain tumor,....

A 60-year-old asymptomatic white woman has an annual physical examination. Laboratory studies show an elevated leukocyte count on complete blood count. Her physician performs a careful physical examination and proceeds with further studies.

All of the following statements about this patient's diagnosis are true except:

A. Physical examination reveals bilateral nontender soft cervical adenopathy and a palpable spleen tip. Review of the peripheral smear demonstrates significant absolute lymphocytosis, anemia, and mild thrombocytopenia. Other laboratory studies demonstrate hypogammaglobulinemia. Median survival with conservative therapy should be approximately 10 years.
B. Physical examination reveals no adenopathy, but the spleen tip is palpable. Review of the peripheral smear demonstrates myeloid cells, including metamyelocytes, myelocytes, an occasional blast, NRBCs (nucleated red blood cells), mild anemia, and thrombocytosis. Other laboratory studies reveal bcr-abl and isochromosome 17. Median survival with conservative therapy will be less than 5 years.
C. Physical examination reveals massive splenomegaly. Subsequent peripheral blood smears demonstrate granulocytopenia and tartrate-resistent acid phosphatase lymphoid cells. Median survival with immunotherapy may be extended.
D. Physical examination reveals generalized peripheral adenopathy and splenomegaly. Review of the peripheral smear demonstrates lymphocytes with convoluted nuclei, T4 immunophenotype, anemia, and thrombocytopenia. Median survival time is brief despite aggressive therapy.
E. Physical examination reveals a large abdominal mass and massive splenomegaly. Review of the peripheral smear demonstrates some prolymphocytes, anemia, and thrombocytopenia. Biopsy of the abdominal mass demonstrates large cells. Median survival is brief despite aggressive therapy.

The correct answer is a.
a. Patient (a) has rather advanced chronic lymphocytic leukemia, which has a shorter life expectancy than patients who present with earlier-stage disease. Patient (b) has chronic myelogenous leukemia, in a more aggressive phase, with isochromosome 17 frequently the adventure of blast crises. Conservative therapy will not yield a 5-year survival in such a patient. Patient (c) has hairy cell leukemia, which should respond well to treatment with interferon. Patient (d) has a T-cell disease, which may be highly aggressive. Patient (e) has the clinical presentation of Richter's syndrome, which has an aggressive course despite treatment.

PBS; leukocytosis, all kinds of myeloid cells(myelopoiesis), thrombocytosis(60%0 or normal(30%)
left-shifted(neutrophil)
philadelphia chromosome

PEX: severe splenomegaly(90%) rare lymphadenopahy, hepatomegaly(50%)
on the chronic phase(90%), median survival 2years

All of the following are risk factors for thromboembolism except

a. Atrial fibrillation
b. Pancreatic cancer
c. Antiphospholipid antibodies
d. Polycythemia vera
e. Hypercholesterolemia

The correct answer is e.
e. Any condition that predisposes to thrombosis such as pancreatic cancer, antiphospholipid antibodies, and polycythemia vera increases the risk of thromboembolism. Atrial fibrillation often leads to mural thrombi, which may dislodge and circulate as systemic arterial emboli. Hypercholesterolemia per se does not cause thromboembolism.

6 weeks old baby was taken by mom to primary physician with cleft lip physician also saw she has cleft palate & Lower lip pit (depression).Doc shuld say that A

a)This is familial

b)This is sporadic

c)This is autosomal Recessive

d)This is autosomal Dominent

e)Mitrochondrial transmission disease

D

Actually cleft lip and palate are multifactorial Or sporadic but if some one have lip pit it is autosomal dominant penetration(>50%) chance to be in subsequent pregnancy

van der Woude syndrome is an autosomal dominant syndrome typically consisting of a cleft lip or cleft palate and distinctive pits of the lower lips. There are wide variations in the degree to which those carrying the gene may be affected, even within families. These variable manifestations include lip pits alone, absent teeth, or isolated cleft lip and palate of varying degrees of severity.

Special Concerns:

Although any lip pits should at least suggest van der Woude syndrome, not all children with lip pits have the syndrome. In fact, commissural pits not associated with van der Woude syndrome occur in about 2% of neonates and may be associated with preauricular sinuses.

Midline pits are unusual and often sporadic, as are pits of the upper lip.

Reports exist of children with cleft lip and palate, lip pits, and complex congenital heart disease who did not have family histories suggestive of van der Woude syndrome. This may be a variant (30-50% of individuals with van der Woude syndrome do not have a family history of the disorder and most likely represent de novo mutations in the disease gene) or a similar, but different entity.

inheritance of facial clefting is multifactorial. Familial inheritance of both cleft lip and palate occurs with varying frequency, depending on whether a parent or sibling is affected. For cleft lip with or without cleft palate, the risk rate for future offspring is 2% with only one parent affected, 4% with only one sibling affected, 9% with two

siblings affected, and 10-17% with one parent and one sibling affected. For cleft palate alone, the risk rate for future offspring is 7% with only one parent affected, 2% with only one sibling affected, 1% with two siblings affected, and 17% with one parent and one sibling affected. Chromosome aberrations such as trisomy D and E have increased incidence of clefts

Which one of the following statements about pregnant women with human immunodeficiency virus (HIV) infection is correct?

A: Pregnant women should not be given zidovudine (Retrovir) because of extensive resistance.
B: Administration of influenza and pneumococcal vaccines should be avoided in pregnant patients.
C: The chance of neonatal infection with HIV is decreased by active management of delivery, including artificial rupture of membranes.
D: Infants whose mothers were treated with zidovudine during labor do not require postpartum treatment.
E: Pregnant patients with positive purified protein derivative (PPD) test results should receive prophylactic therapy during pregnancy.

Answer is E. All pregnant patients with HIV infection should also undergo tuberculin skin testing as part of their routine prenatal care. If patients test positive but do not have active tuberculosis, chemoprophylaxis with isoniazid (INH) and pyridoxine (vitamin B6) is recommended after the first trimester.

CC: 25 year-old-female was admitted to the hospital because of fever, headache and uncontrolled hyperglycemia.

HPI: Patient had been well until nine months earlier, when she started noticing weight gain accompanied by an increased appetite. About 6 months before admission, she began to have polydypsia, polyuria and felt fatigued. She did not seek any medical attention until 2 months ago when she went for her routine physical exam. She had gained approximately fifty pounds, was noted to be hypertensive and had high blood glucose. She was diagnosed with Diabetes Mellitus and started on insulin. Pap smear done at the same time revealed severe cervical dysplasia and she underwent LEEP (Loop Electro Excision Procedure) one week before this hospital admission.

The patient subsequently began to notice severe fatigue along with decreased appetite. Three days before admission, a headache developed which was described as frontal, dull, constant, and moderate in intensity, 6/10, with no aggravating or relieving factors. She also felt feverish but did not take her temperature. On the day of admission, she had nausea and went to see her primary care physician. Her blood glucose was noted to be high at 650 mg/dL and she was admitted. She denied any emesis or abdominal pain. She denied any neck stiffness or visual changes.

PMH: She had asthma during her childhood. She was taking NPH Insulin for Diabetes and was not allergic to any medications.

SH: She was single and was sexually active with one partner for the last six years. She denied any history of sexually transmitted diseases. She had never been pregnant and had had irregular menstrual period for the last six months. She did not smoke and rarely drank alcohol. She denied any other substance abuse.

FH: Her mother and an elder brother have Diabetes Mellitus. Her father and other siblings are well.

ROS: Significant for whitish, thick vaginal discharge with vaginal prurutis. She felt lightheaded with standing.

Physical Examination: Revealed a pulse of 110/min, blood pressure of 154/90 mmHg, temperature of 101.1 F,

and respiratory rate of 18/min. She was orthostatic. She weighed 250 pounds with a BMI of 34. Pupils were equal and reactive to light and extra ocular movements were intact. Fundoscopic exam was normal. Her oropharynx was extremely dry without any erythema or lesions. Sinus exam revealed frontal sinus tenderness bilaterally. Neck was supple without any nuchal rigidity. Lungs were clear to auscultation bilaterally. Heart sounds were normal without any murmurs or gallops. Abdomen was obese with striae, nontender with no organomegaly or masses. Pelvic exam revealed cheesy, white discharge with erythema of vaginal wall. There was no cervical motion tenderness but mild right adnexal tenderness. Neurological exam was unremarkable.

LABS: Na 122 meq/L, K 5.3 meq/L, Cl 79 meq/L, HCO3 23.4 meq/L, Glucose 806 mg/dL, BUN 24 mg/dL, and Cr 1.6 mg/dL.

WBC 10,900/mm3, B 0.1, N 8.4, L 2.2

Hgb 17.2 gm/dL, MCV 88, MCH 32, RDW 13, Platelets 350,000/mm3.

U/A: SG 1.031, Glucose 3+, Ketones 2+, RBC <5, WBC <5. Serum Acetone 4+.

Hospital Course: Patient was admitted and started on intravenous fluids, insulin-drip and work-up for the fever was initiated. Headache intensified and next day the temperature increased to 103.5oF. CT of the head did not reveal any abnormalities. Specimens of blood, urine and sputum were obtained for culture. LP done the following day and revealed a normal opening pressure with RBC of 792, WBC 8, N 94%, L 6%, glucose of 177 (serum glucose=250), protein 45. She was started on ceftriaxone. She continued to be febrile with daily temperature ranging from 103-104oF and required large doses of insulin (50 U/hour). CT of the abdomen and pelvis showed enlarged right ovarian cyst but was otherwise negative. On the fourth day, she became hypotensive with blood pressure of 90/50. Antibiotic coverage was broadened and she was transferred to Intensive Care Unit and started on dopamine

You are asked to evaluate a 19-year-old man who presents to the emergency department with a sudden onset of right-sided weakness and dysarthria. He has no significant past medical history. He last saw a physician for a broken arm 4 years ago. He denies using illicit drugs, denies smoking, and is a social drinker. His physical examination and laboratory data are normal, despite the neurologic deficit. His ECG reveals a normal sinus rhythm with a normal QRS, ST, and T wave. A magnetic resonance imaging (MRI) scan is obtained and is positive for an embolic event.
Following your evaluation, you would next suggest:

a. No cardiac workup is necessary because this condition is most likely related to drugs.
b. Obtain a serial ECG and cardiac enzymes to detect a silent MI.
c. Obtain an echocardiogram focusing on the atria and intraatrial septum.
d. Obtain a carotid duplex scan to rule out a carotid stenosis.
e. Obtain a transesophageal echocardiogram focusing on the aorta for intraaortic debris

b. Paradoxical emboli that reach the brain from the peripheral circulation through an intraatrial communication are becoming a well-recognized etiology of cerebral embolism, especially in younger people. It is unlikely that this patient has suffered a myocardial infarction, given the normal echocardiogram. A transesophageal echocardiogram and/or a carotid duplex scan would be warranted if the emboli source were suspected to rise from either the carotids or the aorta, which is of lower likelihood in a younger person. Drugs are always a concern when cerebral vascular events occur and should be identified if suspected. A transthoracic echocardiogram with the injection of agitated saline (contrast echocardiogram) in a peripheral vein will reveal if a functional communication exits across the intraatrial septum with the appearance of bubbles on the left side of the heart. (N Engl J Med 1988;318:1148)

For those asymptomatic patients diagnosed with an accessory pathway on a surface ECG, you would suggest:

a. Perform immediate electrophysiologic studies to determine the location of the pathway and consider ablation.
b. Initiate a prophylactic calcium channel blocker.
c. Obtain a single average ECG to look for late potentials.
d. Administer a â-blocker.
e. None of the above.

e is CORRECT.
e. In those asymptomatic patients (without known supraventricular tachycardia) in which an accessory pathway is identified on the surface ECG, no therapy or other diagnostic modality is warranted. Efforts should be made while taking the patient's history to uncover dizziness, palpitations, syncope, or other symptoms that may be attributed to a tachycardic event. Currently, there is no evidence that the risk of sudden death can be altered in these asymptomatic patients.

Which of the following statements regarding disease-modifying antirheumatic drugs (DMARDs) is true?

a. They reliably induce remission in patients with seropositive rheumatoid arthritis (RA).

b. They are indicated only for patients with seropositive RA.
c. They cannot be coadministered with nonsteroidal antiinflammatory drugs.
d. They may slow the progression of joint erosion.
e. All of the above.

D

DMARDs, also referred to as slow-acting antirheumatic drugs (SAARDs), may retard the progression of erosive and deforming disease in patients with seropositive and seronegative RA. They are frequently coadministered with nonsteroidal antiinflammatory drugs (NSAIDs), although individual agents may be subject to drug–drug interactions. DMARDs, also referred to as slow-acting antirheumatic drugs (SAARDs), may retard the progression of erosive and deforming disease in patients with seropositive and seronegative RA. They are frequently coadministered with nonsteroidal antiinflammatory drugs (NSAIDs), although individual agents may be subject to drug–drug interactions.

Proximal renal tubular acidosis (RTA) is associated with which finding?

a. High anion gap metabolic acidosis
b. Urine pH always >5.4
c. Associated with membranous glomerulonephritis (GN)
d. Reduced bicarbonate reabsorption
e. Decreased H+ and K+ secretion by the distal tubule

d is CORRECT.

d. Patients with proximal RTA have a decrease in the maximum capacity of the proximal tubule to reabsorb bicarbonate. Bicarbonate is lost into the urine until the filtered load of bicarbonate is less than the reabsorptive capacities of the proximal tubule. Because distal acidification is normal, urine pH may be appropriately low.

1)A 54 year-old Hispanic man with Type 2 diabetes came to you for annual visit.
A microalbumin determination on the spot urine sample is 146 mg per gram of creatinine.
Which of the following should you do now?

a Repeat the microalbumin level in one year
b Repeat the microalbumin level in the next 3-6 months to confirm it
c Normalize glycemic control first, then repeat the microalbumin level
d Normalize blood pressure control first, then repeat the microalbumin level
e Start an ACE inhibitor agent

2)A microalbumin level is repeated one month later, the result is 161 mg per gram of creatinine.
Which of the following should you do now?

a Repeat the microalbumin level in one year
b Repeat the microalbumin level in the next 6 months to confirm it
c Normalize glycemic control, then repeat the microalbumin level

d Normalize blood pressure control, then repeat the microalbumin level

e Start an ACE inhibitor agent

1. Answer is B. Repeat the microalbumin level in the next 3-6 months to confirm it. Because there is inherent variability in urinary albumin excretion, at least 2 out of 3 samples collected on different occasions within a 3- to 6-month period must be abnormal to reliably diagnose microalbuminuria . False elevations of urinary albumin may be precipitated by fever, infection, congestive heart failure, severe hypertension, hyperglycemia, or exercise within the preceding 24 hours. Once confirmed, however, aggressive glycemic control, control of coexisting hypertension and use of angiotensin-converting enzyme (ACE) inhibitors will retard the progression of microalbuminuria to renal failure, independent of blood pressure reductions.
   Annual screening for microalbuminuria should be done only for those patients with normal albumin excretion. Microalbuminuria caused exclusively by hyperglycemia or hypertension usually occurs when either is severe; hyperglycemia or hypertension do not need to be completely normalized to rule them out as contributors to microalbuminuria. There are no current data to indicate that ACE inhibitors delay the onset of microalbuminuria, thus, there is no reason to indicate ACE inhibitors before the diagnosis of microalbuminuria. However, some patients may benefit from the preventive cardiovascular benefits of ACE inhibitors.

   2. Answer is E. Start an ACE inhibitor agent
   Clinically significant microalbuminuria on 2 separate samples warrants treatment with an ACE inhibitor agent. Annual screening for microalbuminuria is reserved for patients with normal albumin excretion. There is no need to repeat the microalbumin level again before starting therapy. It is unlikely that the patient’s current level of hyperglycemia or moderate hypertension would cause a falsely-elevated microalbuminuria level on 2 separate occasions.

A patient with history of HTN treated with captopril came to office with angeonuretic edema. what would be the cause?

a)Due to C1 esterase defficience

b)A anaphylactic reaction

c)Activation of C3,5

d)Activation C678

e)Ch allergic vasculitis

C

This is a type of anaphylactoid reaction that due to activation of local mediators and complements.specially C3,5

Angioneurotic edema is an infrequently reported adverse reaction to ACE inhibitors. It has been associated with each of the drugs in this class, but is most commonly reported with captopril.An incidence of 0.1% is estimated for captopril, whereas reports suggest an incidence of 0.02% for enalapril.

The most attractive hypothesis for the pathogenesis of angioneurotic edema precipitated by ACE-inhibitors involves activation of the kininogen-kinin system. In the susceptible individual, an increase in the level of bradykinin is critical. The breakdown of bradykinin is prevented by ACE inhibitors. The subsequent increase in bradykinin leads to activation of inflammatory modulating peptides such as substance P and neuropeptide Y. A local release of histamine is promoted. Bradykinin is also a potent vasodilator promoting both local and systemic angioedema. Diminished levels of angiotensin II allow vascular dilatation and tissue edema to proceed unchallenged.

A diabetic patient with lipid profile LDL 240mg% HDL 34
Triglyceride 500mg% which one possess highest risk of CAD?
a)LDL level
b)HDL level
c)Triglyceride level

B

Normal Risk
LDL>HDL>Triglyceride
But when HLD<35mg% It becomes No 1 CAD risk

The ADA has made recommendations for the treatment of dyslipidemia in adults with diabetes. Treatment of elevated LDL is considered the first priority for pharmacologic therapy of dyslipidemia, based on existing research demonstrating a reduction in CHD following such treatment. The first choice for therapy is statins, and the second choice is a bile acid binding resin or fenofibrate.

The second goal for treating diabetic dyslipidemia is to increase HDL levels. For this goal, the ADA recommends initially using behavioral interventions, such as weight loss, increased physical activity, and smoking cessation. These should be followed with glycemic control and treatment with fibrates or nicotinic acid (with careful monitoring of glycemic control).

Lowering triglycerides is the third goal defined by the ADA. Glycemic control is the first priority, followed by

use of a fibric acid derivative (gemfibrozil or fenofibrate). The ADA notes that statins are moderately effective at lowering triglycerides when used at high doses in hypertriglyceridemic patients who also have high levels of LDL.

All of the followings are coronary risk factors except

a. diabestes

b. Dad with Hx of MI at 57 yo

c. Elevated homocysteine

d. sedentary lefestyle

e. left ventricular hypertrophy

B or E

I think b. If the age of DAD at the time of MI was less than 55 than it is a risk factor...

CHF without associated systolic dysfunction least commonly occure in patients with

a. Hypertension

b. Chronic mitral regurgiutation

c. mitral stenosis

d. chronic aortic insufficiency

e. constrictive pericarditis

predominant systolic failure

1.coronary heart disease

2.HTN

3.DCMP-idiopathic ,toxic,infection

TR and MR are common due to the effect of chamber dilatationon the valvular apparatus

predominant diastolic failure

1.HTN

2.HCMP

3.RCMP

4.constrictive pericarditis

5.high output failure-chronic anemia,AV shunt,thyrotoxicosis

A patient has no cardiac risk but has a carotid bruit. His LDL-cholesterol level should be maintained at

a. <190 mg/dl

b. <160 .....

c. <130 .....

d. <100 .....

e. <75 .....

52 yrs Pt h/o smoking and Total cholesterol 148mg% and HDL 34 mg% and FBS 110mg% BP 120/80 mg what do you want to do next?

a) Advice for glucose tolerance test

b)Lipid profile in next 5 yrs

c)Fasting lipid profile

d)Lipid cheek in 1 yr

e)Advice for type I diet & exercise

C

This pt has low HDL (<35mg%) needs fast lipid profile a risk factor for coronary disease.

All of the following statements about radioiodine thyroid ablation are true except:

Answer

A - This is the preferred method of treatment for patients over 21 years of age in the U.S.A.

B - Dose of radioiodine is calculated according to patient's ideal body weight

C - It usually takes 6-12 weeks for patients to become euthyroid.

D - The major complication is hypothyroidism.

E - It is necessary to increase the dose of radioiodine if patient has previously been treated with antithyroid drugs

E

A radioactive iodine treatment takes about two to four months to work, after which most patients actually develop a permanent underactive thyroid condition (hypothyroidism).The radioactive iodine treatment is effective about 90 to 95 percent of the time, however an occasional patient may require a second dose.
Radioactive iodine cannot be given to pregnant or nursing women.Antithyroid drugs may be given before and/or after radioiodine therapy to help control the hyperthyroidism until the radiation has a chance to work.

A 36-year-old female patient with Graves' disease has been treated with propylthiouracil (PTU). Her maintenance dose is 100 mg twice a day, and her disease is well controlled. She develops sore throat and fever. What is the appropriate management in this situation?

Answer
A - She should be started on empiric antibiotic therapy.
B - She should be advised to take plenty of fluid but no antibiotics since her sore throat is most likely just viral illness.
C - Dose of propylthiouracil should be increased since febrile illness may stimulate increased release of hormones from thyroid.
D - Dose of propylthiouracil should be decreased since febrile illness requires higher basal metabolism than suppressed thyroid can provide.
E - Propylthiouracil should be stopped immediately; white blood cell count and differential should be obtained

E

Sore throat is an early sign of neutropenia

All of the following are features of myxedema coma except:

Answer

A - Gradual onset of lethargy progressing to stupor and coma

B - Hyponatremia

C - Hyperthermia

D - History of previous thyroid disease

E - High serum carotene

C

With which of the following conditions is hypothyroidism most frequently confused?

Answer

A - Depression

B - Addison’s disease

C - Panhypopituitarism

D - Nephrotic syndrome

E - Cushing’s syndrome

A

A 54-year-old male has been diagnosed with hypothyroidism. He has typical clinical signs, but he also has marked dyspnea on exertion, which is occasionally accompanied with chest pain. This pain is mid-sternal, pressing, and radiates to neck and left shoulder. Rest relieves pain and shortness of breath. Which of the following options is the best management for this patient?

Answer

A - Start patient on levothyroxin and proceed with cardiac evaluation simultaneously.

B - Start patient on levothyroxin and proceed with cardiac evaluation in 6 weeks when it can be demonstrated that patient is euthyroid.

C - Patient should be started on levothyroxin and aspirin and observed for next 3 months because it is likely that his dyspnea and chest pain will disappear with successful treatment of hypothyroidism.

D - Patient should have cardiac evaluation; and coronary artery disease, if present, should be corrected (PTCA, CABG) prior to start of the levothyroxine replacement therapy.

E - Patient should be started on levothyroxine and long acting nitrate. Cardiac evaluation should be postponed at least 1 year because his cardiac condition is most likely not caused by coronary artery disease, but more likely by myocardiopathy, which may gradually improve

An infant born of a mother with Hashimoto’s thyroiditis develops respiratory difficulties with cyanosis, jaundice, umbilical hernia, poor feeding, weakness, and retardation of bone maturation. Which of the following tests is most likely to reveal the reason for his condition?

Answer
A - TSH and T4 determination
B - Peripheral blood smear
C - MRI of the sella turcica
D - MRI of the brain
E - Ultrasound of the liver

A

All of the following are measures that may be employed in the treatment of the syndrome of inappropriate ADH secretion (SIADH) except:

Answer
A - Water restriction
B - Hypertonic or normotonic saline infusion
C - Furosemide or ethacrynic acid administration
D - Demeclocycline administration
E - Aldosterone administration

E

73-year-old patient with advanced bronchogenic carcinoma but still stable body weight is found to have marked hyponatremia. Which of the following is the likely cause of his condition?

Answer

A - Poor oral intake of sodium

B - Syndrome of inappropriate secretion of ADH

C - Congestive heart failure

D - Severe liver disease due to hepatic metastases

E - Nephrogenic diabetes insipidus

B

A 56-year-old female presented with vague symptoms of weakness, polyuria, and confusion. She was found to be markedly hyponatremic (Na-118). Her serum osmolality was 257 mosm/L and urine osmolality was 111 mosm/L. After overnight water restriction her urine osmolality was 450 mosm/L. Which of the following is the most likely cause of her hyponatremia?

Answer

A - Nephrogenic diabetes insipidus

B - Neurogenic diabetes insipidus

C - Syndrome of inappropriate ADH secretion
D - Psychogenic polydipsia
E - Congestive heart disease

D

After a bilateral adrenalectomy for Cushing’s disease, a patient presents with hyperpigmentation of the skin, headache and visual disturbances, and extra-ocular muscle palsies. Which of the following is the most likely diagnosis?

Answer
A - Nelson’s syndrome
B - Recurrent Cushing’s disease
C - Addison’s disease
D - Hypoaldosteronism
E - Hyperreninemia

A

All of the following statements about Cushing's disease are true except:

Answer

A - It is caused by hypersecretion of ACTH and characterized by bilateral adrenocortical hyperplasia and hypercortisolism.

B - Circadian periodicity of ACTH and cortisol secretion are absent.

C - Responsiveness of ACTH and cortisol to stress are absent.

D - There is an abnormal negative feedback of ACTH secretion by glucocorticoids.

E - Iatrogenic disease is today the most common form of the disease

E

Which one of the following is the simplest and most specific dynamic test for acromegaly diagnosis?

Answer

A - Basal fasting growth hormone level

B - Growth hormone stimulation with TRH

C - Paradoxical suppression of growth hormone by levodopa

D - Oral glucose suppression test

E - Absence of nocturnal growth hormone surge

D

All of the following may be seen in patients suffering from acromegaly except:

Answer
A - Glucose intolerance
B - Hypothyroidism
C - Hypoinsulinemia
D - Gynecomastia
E - Visual deficit

B

A 52-year-old male patient noticed a gradual increase in the size of his shoes and hat. He also noticed increased sweating, heat intolerance, oiliness of the skin, fatigue, and weight gain. Which of the following is most likely to be responsible for his symptoms?

Answer
A - Autonomously increased thyroid function
B - Pituitary adenoma
C - Pituitary hyperplasia
D - Hypothalamic dysfunction
E - Destruction of the pituitary by adjacent tumor

B

A 33-year-old female is diagnosed with pituitary adenoma (8 mm) secreting prolactin. Her symptoms are classic: galactorrhea and amenorrhea. She is about to start therapy with prolactin. She wishes to know what the chance is that this therapy will be successful. Which one of the following describes her prognosis accurately?

Answer
A - In patients with microadenomas bromocriptine is virtually always successful.
B - Chances for improvement of galactorrhea are about 99% but the normal gonadal function returns in only 30-40% of patients.
C - There is an 80% likelihood of improvement; and if therapy is continued for 1 year or more, the likelihood of permanent remission is about 60%.
D - About 80% of patients achieve normal prolactin levels, and their gonadal function normalizes.
E - Only 50% of patients have successful suppression of the prolactin hypersecretion

C

A 58-year-old female complained of intermittent right upper quadrant pain. Upper abdominal ultrasound revealed calcified gallbladder stones. Her history includes remote perforated duodenal ulcer that required multiple surgeries at the time and occasional residual dyspepsia since that time despite H2-blocker therapy. What is the modality of choice to treat cholelithiasis in this patient?

A - Oral dissolution of the stones
B - Extracorporeal shock wave lithotripsy
C - Laparoscopic cholecystectomy

D - Cholecystectomy via open subcostal incision
E - Contact dissolution therapy

D

d-- If it has to be cholecystectomy.. it is d..not LAp.
The patent has had prev abdo SX .. ie he should have adhesions .. and a laparoscopy would not be easy in this case.

Which one of the following statements about hepatitis B vaccine is true?
A - The preferred injection site is the buttocks.
B - After the initial immunization series, routine booster vaccination is recommended.
C - Despite the availability of effective vaccines, the incidence of hepatitis B appears to be rising in the United States.
D - Patients who receive the vaccine and already are carrying the hepatitis B virus may have severe adverse effects.
E - Individuals who do not respond to initial vaccination are highly likely to respond to repeated vaccination.

D

The Centers for Disease Control and the American Academy of Pediatrics recommend that all newborns, infants and children, especially sexually active teenagers be vaccinated against hepatitis B.

Vaccination is also recommended for individuals at high risk of being infected with the hepatitis B virus (HBV). These include:

Health care workers, including doctors, dentists, nurses, blood and lab technicians;
Emergency workers - including paramedics, fire fighters and police;

Hemodialysis patients;
Military personnel;
Morticians and embalmers;
Patients and staff of institutions for the mentally handicapped, inmates of long-term correctional institutions;
Ethnic groups with a high rate of hepatitis B including Chinese, Koreans, Indochinese, Filipinos, Alaskan Eskimos, Haitians, and American Indians;
People with multiple sexual partners;
Intravenous drug users;
Recipients of certain blood products;
Household contacts and sex partners of hepatitis B carriers;
International travelers
Those who are already infected will not benefit from vaccination. However, infants born of mothers who are carriers of the hepatitis B virus can be protected. A simple blood test can determine whether someone is a hepatitis B carrier.
Immunization requires three doses of vaccine according to the following schedule:

1st dose: For infants born to infected mothers - within 12 hours.
For infants born to mothers who test negative - within one to
two months following delivery.
2nd dose: 1 month later
3rd dose: 6 months after the first dose.
Administration is by intramuscular injection in the thigh or upper arm.

Addition:
HIV + individuals are encouraged to get HB vaccination, as well hemophyliacs.
Booster vaccinations are reccomended according to antibody titers. Such recc varies according to the country and type of work.

Which one of the following findings would be most characteristic in a patient with chronic persistent hepatitis?

A - A serum bilirubin of 4 mg/dl

B - Fatigue and malaise

C - A prolonged prothrombin time

D - Piecemeal necrosis on liver biopsy

E - AST and ALT levels greater than 300 IU/L

B

the fatigus ans weakness are the most common findings rest are with active hepatitis

A 23-year-old Irish man presents to you with diarrhea and weight loss. He has a positive anti-endomysial antibody. His small bowel biopsy is most likely to show:

A - Large, PAS positive macrophages

B - Flattened villi and hyperplastic crypts

C - Microsporidia

D - Giardia lamblia

E - Normal mucosa

B

Celiac disease is a genetic, immunologically mediated small bowel enteropathy that causes malabsorption. The immune inflammatory response to gluten frequently causes damage to many other tissues of the body. Sprue primarily affects the mucosal layer, which is where an inflammatory state, caused by a cascade of immune events, is activated in predisposed individuals by the exposure to gliadins. The condition causes a deepening and hyperplasia of the crypts and a concomitant flattening of the villi (ie, fingerlike projections of the mucosa with the primary function of increasing its absorptive surface). The condition is frequently underdiagnosed because of its protean presentations. New prevalence data indicate that symptomatic and latent celiac disease is present in one of 300 people of European descent. Symptomatic presentations include general ill-health, as well as dermatologic, hematologic, musculoskeletal, mucosal, dental, psychologic and neurologic diseases. Celiac disease has a 95

percent genetic predisposition and, thus, it is frequently associated with autoimmune conditions such as diabetes mellitus type 1 and thyroid disease. Untreated patients have an increased incidence of osteoporosis and intestinal lymphoma. Excellent diagnostic screening tests are now available, including those that detect antigliadin and antiendomysial antibodies. Therapy with a gluten-free diet is effective, resulting in complete resolution of symptoms and secondary complications in almost all patients. Local and national celiac-sprue associations facilitate care of patients with celiac disease and support dietary compliance.

Which one of the following statements about peptic ulcer disease is true?

Answer

A - The mortality rate of upper gastrointestinal bleeding has decreased with the introduction of proton pump inhibitors.

B - Misoprostol but not lansoprazole has been shown to prevent NSAID induced ulcers.

C - The hematocrit is a reliable test after acute hemorrhage.

D - The prevalence of H. Pylori in duodenal ulcer disease in the United States is about 75%.

E - Enteric-coated 81 mg aspirin will not decrease gastric mucosal prostaglandin production.

D

According for the Centers for Disease Control and Prevention, more than 90% of duodenal ulcers are caused by Helicobacter pylori (H. pylori) bacterium.

A 55-year-old female has recently undergone successful medical therapy for endoscopically proven helicobacter pylori serology positive duodenal ulcer. The best method to confirm H. pylori eradication is:

A - Repeat serology
B - Histology
C - C14 urea breath test on omeprazole therapy
D - Culture
E - C13 urea breath test after therapy

E

Confirming H pylori eradication is not mandatory in most situations due to cost. It is reasonable to confirm eradication in patients with complicated ulcer disease, low-grade MALT lymphoma, or following resection of early gastric cancer. The need to confirm H pylori eradication in other situations should be decided on a case-by-case basis. Testing to document eradication should be delayed at least 4 weeks after completion of therapy to avoid false-negative results. Urea breath test is the method of choice to confirm eradication; serology is not useful because antibody levels remain elevated after treatment.

Gastrointestinal endoscopy is superior to contrast radiography in all of the following illnesses except:

A - Peptic ulcer disease

B - Colonic neoplasm

C - Esophagitis in AIDS

D - Intussusception

E - Crohn’s colitis

D

Which one is not a complication of ch HCV infection

a)Porphyria cutenia terda

b)Cryoglodulinimia -II

c)Ch vasculitis

d)Lichen planus

e)T cell lymphoma

E

extrahepatic manifestation of chronic HCV

responsive to management of the underlying HCV infection.

vasculitic syndromes (essential mixed cryoglobulinemia and cutaneous vasculitis) and membranoproliferative glomerulonephritis.

Less well established associations include porphyria cutanea tarda, Sjogren's syndrome, lichen planus, Mooren corneal ulcerations and perhaps, pulminary fibrosis and rheumatoid arthritis.

Complications of Chronic HCV infection, seen after 20-30 years are usually:

Cirrhosis – 10-20%

Hepatocellular Carcinoma (HCC) – seen in 1-5% patients after 20-30 years but the incidence in patients with Cirrhosis is higher and is usually 1-4% per year (signifying more active disease)

Mortality is a rare complication.

HCV infection has also been implicated in the pathogenesis of a number of other diseases e.g.:

Arthritis

Kerato-conjuctivitis sicca

Lichen planus

Autoimmune hepatitis

Porphyria cutanea tarda

Cryoglobulinemia

Glomerulonephritis

Non-hodgkin's lymphoma

A 23-year-old man presented with a 2-week history of a "rash" on both wrists. He complained of generalized pruritus that seemed to be worse at night. He has tried a 1/2% hydrocortisone cream topically which has been minimally effective in relieving his symptoms. He did not recall any recent change in his normal routine, with the exception of spending a weekend at friend's cabin in Michigan a month earlier, where he borrowed a friend's sleeping bag. He denied any contact with "poison ivy" while in Michigan. Examination of the man's wrists show numerous papules and pustules. The lesions can also be observed between the fingers on both hands. Linear burrows are not observed.

WHAT IS MOST LIKELY DIAGNOSIS:

A.Atopic dermatitis
B.Scabies
C.Tinea manuum
D.Warts
E.Contact dermatitis

Answer is B. This patient is suffering from scabies. Scabies is caused by infestation with the Sarcoptes scabiei mite. The intense pruritus is a result of sensitization to a mite protein. Answer is B. This patient is suffering from scabies. Scabies is caused by infestation with the Sarcoptes scabiei mite. The intense pruritus is a result of sensitization to a mite protein.

A 40-year-old white man with known HIV positive serology for 5 years was referred to the Dermatology clinic with complaints of blisters on both of his hands and face of several weeks duration. Some of the blistered areas had healed; however, new blisters formed in the same regions and in new locations. He noticed that the condition worsened wih exposure to sunlight. In addition, he indicates that has a history of Kaposi's sarcoma on his feet and genital regions treated with radiation and chemotherapy 1 year ago.

The patient has vesicles and ruptured bullae in various stages of healing on the dorsum of both hands. These affected areas, in addition to the face, show thickening and scarring with post-inflammatory hyperpigmentation. Scleral icterus and extensive facial hair was also noted on physical examination.

WHAT IS MOST LIKELY DIAGNOSIS:

A.Porphyria Cutanea Tarda
B.Bullous Pemphigoid
C.Bullous Impetigo
D.Atopic dermatitis
E.Herpes Simplex

Answer is A. Porphyria cutanea tarda (PCT) is the most common type of porphyria. Porphyrias are caused by hepatic damage and abnormalities in the heme biosynthetic pathway. This results in abnormal porphyrin metabolism and excessive accumulation of various porphyrins. PCT is characterized by subepidermal bullae on the hands and markedly elevated urine uroporphyrins and coporphyrins (ratio of 3 : 1, respectively). These metabolic changes are diagnostic. Liver function tests and serum iron levels are also elevated. Bullae, vesicles, crusts, erosions and scarring occur on sun-exposed skin, especially the dorsum of hands. Facial hair and mottled facial pigmentation also occur. PCT is commonly associated with HCV and HIV positive serologies.

Which of the following statements is false?

a) A relationship has been noted between maternal smoking and Sudden Infant Death Syndrome (SIDS)

b) Overall, even after controlling for maternal smoking and other covariants, paternal smoking remained associated with SIDS

c) The risk of SIDS associated with smoking increased when the comparison was restricted to smoking in the same room as the infant

d) A 5- to 10-fold increase in risk of SIDS is typically found among children of smokers

D

SIDS is the leading cause of death among children under one year of age and is responsible for nearly half of the deaths for children between two and four months of age. When a woman smokes during pregnancy, the risk of SIDS is at least doubled, and possibly tripled. It's estimated that more than 1/3 of all SIDS deaths are due to maternal tobacco use.

Few points about maternal smoking.
Women who smoke are 33% more likely to have a low birth weight baby. The risk of miscarriage in smokers in the first 20 weeks of pregnancy is 33% higher than in nonsmokers.Maternal smoking increases the risk of stillbirth by 33%.Growing evidence suggests that smoking during pregnancy may also be associated with deficits in intellectual ability and behavioural problems in children.

higher risk)
1.males versus females, among infants aged 2-4 months 2.lower socioeconomic status.

3.when infants sleep on their front (prone) than when they sleep on their back (supine)

4.Maternal smoking during pregnancy

There is also evidence of an independent increased risk to infants exposed to tobacco smoke in the household.

5.Overheating

Which of the following is not a contraindication for OC(ORAL CONTRACEPTIVES)use:

a) Active viral hepatitis

b) Benign liver tumor

c) Diabetes

d) Endometriosis

D

OC is used as treatment for endometriosis

absolute CIx. for OC

1.venous thrombosis

2.pulmonary embolism

3.coronary vascular disease

4.CVA

5.breast/endometrial ca.

6.melanoma

7.hepatic tumor
8.abnormal liver function
DM is relative CIx.

Oral contraceptives offer protection against all of the following except:

a. Dysmenorrhea and menorrhagia
b. Ectopic pregnancy
c. Breast cancer
d. Ovarian cysts
e. Pelvic inflammatory disease

C

Because many of the risk factors for breast cancer are related to natural hormones, and because OCs work by manipulating these hormones, there has been some concern about the possible effects of medicines such as OCs on breast cancer risk, especially if women take them for many years. Sufficient time has elapsed since the introduction of OCs to allow investigators to study large numbers of women who took birth control pills for many years beginning at a young age and to follow them as they became older.

However, studies examining the use of OCs as a risk factor for breast cancer have produced inconsistent results. Most studies have not found an overall increased risk for breast cancer associated with OC use. In June 1995, however, investigators at the National Cancer Institute (NCI) reported an increased risk of developing breast cancer among women under age 35 who had used birth control pills for at least 6 months, compared with those who had never used OCs. They also saw a slightly lower, but still elevated, risk among women ages 35 to 44. In addition, their research showed a higher risk among long-term OC users, especially those who had started to take the pill before age 18.

A 1996 analysis of worldwide epidemiologic data, which included information from the 1995 study, found that women who were current or recent users of birth control pills had a slightly elevated risk of developing breast cancer.

according to the blueprint
noncontraceptive health benefit of OC
1.decrease life threatening disease
ovarian ca.
ectopic pregnancy
anemia
PID
endometrial ca
2.alleviate quality of life problem
IDA
dysmenorrhea
functional ovairan cyst
benign breast disease
osteoporosis

30 yrs women forgot to take her OCPs and had sex with her husband for two consequtive days and came on third day to family physician to know what to do. What would be the avvice?

a)Take three pills to night then regular

b)Take 2 pills for 2 consedutive night then regular

c)Order pregnancy test & 2 pills for 2 consequtive days the regular

d)Take 2 pills for 2 consequtive days then regular plus condom up to cycle

e) Stop taking pills use condom for the cycle and pregnancy test.

D

Missed pill

If it has been less than 24 hours since the last pill was taken, the patient takes a pill right away and then returns to normal pill-taking routine.

If it has been 24 hours since the last pill was taken, the patient takes both the missed pill and the next scheduled pill at the same time.

If it has been more than 24 hours since the last pill was taken (i.e., two or more missed pills), the patient takes the last pill that was missed, throws out the other missed pills and takes the next pill on time. Additional contraception is used for the remainder of the cycle

ref-up date on OCP in american family physicians

abortion laws differ from state to state ,I believe. And so I was told that this wont tested on the exam.

I think minor has no rights (correct me if I am wrong)partial emancipation(>/= 16 yrs) have rights for

contraception,std counselling and treament,prenatal care ,substance abuse Rx.
Emancipated minor(13 yrs) living by self/married...them...they get adult rights.

No, you don't need parents' consent.you can do any treatment related to pregnancy(prenatal care,abortion) with just the minors' consent.

see my other message in which I have given a tabular column sort of thing which tells you the requirements for consent at different situations.

30 years female h/o siezure well conrolled with pills recently changed her contraceptives to OCP came in ER with acute attack of seizure. Where she was given phenytoin and seizure was well controlled.Next day on round the medical student saw that her phenytoin level 20(some unit) and eye exam shows horizental nystigmas. He rushed to the resident to do some thing for her.what do you wantto do next?
a)Stop phenytoin
b)Stop phenytoin and cheek blood level
c)Wait and see
D) Cheek LFT
e) Decrease the dose of phenytoin.

C

Horizental nystigmas is a sign of good working level
Vertical nystigmas is a sign of toxicity(>25 blood level)

The patient was stable on some anti-convulsant (ACV).
She started OCP's and the got a seizure..ie the estrogen increased the albumin level and hence more of the ACV was protein-bound. The free level of the drug decreased leading to a seizure. Makes sense??

znow, She is given Phenytoin and stops seizing.. but develops a phenytoin tox the nxt day..Nystagmus is often the first sign of tox.

60 years oid man with history ASD with primum defect cand BHP with temp 99.1 degree came with acute urinary retention, lower abdominal discomfort and distention. what do you want to do next
a)Bladder catheterization
b)DRE + Catheter
c)Amoxicillin prophylaxis + catheter
D) DRE + amoxicillin prophylaxis + Catheter

C

Acute retention no DRE
UTI with catheter needs endo prophylaxis but patient without UTI with catheter no need of prophylaxis
Primum defect needs prophylaxis not in secundum defect

20 years lady came to family physician that recently her boy friend was diagoned with HPV infection.She is worried that it is associated with Cx ca. you did the PAP that shows normal. what do you want to do next

a) Advice for using condom

b)Re evaluate her boy friend

c) Colposcopy

d)Serology for HPV on her

e)PAP after I year

C

If partner has HPV infection do colposcopy whatever the PAP .

58 years old woman came to family physician regarding her vaginal bleeding . Family physician ordered PAP smear that shows atypical endometrial & endocervical cells . What would be the next step-

a)Repeat PAP

b)Do colposcopy

c) Do colposcopy + endocervical curettage

d)Do Colposcopy + ECC + Endometrial biopsy

E)Testosterone +repeat PAP

A

atypical Endocervical cells or endometrial cells needs repeat PAP if same result do colposcopy with ECC and endometrial biopsy. atypical Endocervical cells or endometrial cells needs repeat PAP if same result do colposcopy with ECC and endometrial biopsy.

The finding of atypical glandular cells (AGUS) is completely different and much more significant than ASCUS.Studies indicate that upwards of 30% of cases of AGUS represent serious underlying conditions, notably adenocarcinoma in situ, adenocarcinoma of the cervix, endometrial adenocarcinoma, and squamous lesions of the cervix. Therefore, a patient with AGUS should be referred immediately for a complete evaluation, including colposcopy, endocervical curettage, and possible endometrial biopsy.
If a postmenopausal patient is found to have atypical squamous cells of undetermined significance (ASCUS), repeat the Pap smear in 4 weeks. In the interval, recommendation is that the patient use vaginal estrogen cream (conjugated equine estrogens [Premarin], one full applicator nightly) for the first 2 weeks and then wait 2 weeks before the visit. The estrogen eliminates atrophy as a cause of atypia.

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Management of postmenopausal bleeding.

Mild spotting may be observed on initiation of HRT. Otherwise, postmenopausal bleeding always requires complete evaluation for endometrial hyperplasia or carcinoma, with endometrial biopsy or D&C followed by hysteroscopy if bleeding continues. Alternatively, an endovaginal ultrasound showing an endometrial stripe of less than 5 mm excludes endometrial carcinoma with sensitivity close to 100%, specificity 75%. Biopsy is

required if stripe is 5mm or greater. The specificity is markedly reduced in women on HRT because of the resulting increase in endometrium. The same contraindications for OCPs should be considered. For bleeding due to atrophic endometrium, start HRT, or if already on HRT increase the estrogen component by 50% to 100% for 3 months. For bleeding due to proliferative endometrium, start HRT, or if already on HRT increase the progestin component by 50% to 100%.

(I)Mom of a 14 year old boy bring her kid to the family physician regarding his "round back" .Xray of her lumber spine shows 35 degree angulation. the boy complaining no problems .What would be your primary response to mom?

a)This is normal physiological change dont worry

b)This is Idiopathic scoliosis needs orthopedic refeeral

c)This is juvenail kyposis -use brace & do exercise

d)This is spondylolethiasis needs surgical correction

e)Please come after 3 months.

(II)After getting appropriate advice mom was back after # months with her kid due to back pain prolong standing .Lateral Xray shows 55 degree angulation.what would be the intervention

a) Use brace & back strenthening exercise- see after 3 months.

b)Immediate orthopedic referal.

c)Surgical correction of spodylolethiasis

d)Complete skeletal survey for bone metastasis

Correct ans-(I)-a & (II)-a

Juvenile kyposis when thoracic colum angulation>45 degree
45-60 degree needs brace & back strengthening exercise
>70 degree orthopedic emergency

A 78-year-old black man, a retired chemistry professor, comes to you because of lumbosacral vertebral pain. There is no hepatomegaly. Cardiac exam is normal and there is no evidence of arthritis. His Hct, MCV, WBC and differential are normal. Liver enzymes are normal, but total serum protein is mildly elevated. The serum Ca is normal. You find no protein in his urine. A marrow aspirate&biopsy showed 6% plasma cells (normal=0-5%). A roetgenographic survey was negative.
What is the most likely diagnosis based on the history and laboratory findings?

A. Waldenstrom's macroglobulinemia
B. Amyloidosis
C. Myeloma
D. Monoclonal Gammopathy of Unknown Significance
E. Heavy Chain Disease

Answer is D. This is a monoclonal gammopathy of unknown significance (MGUS) in which there is no underlying cause, despite marrow plasmacytosis and an M protein. MGUS is seen in 5% of people >70yrs of age. Approximately 10% of MGUS patients develop myeloma within 5 years and almost 20% will develop a malignant PCD (myeloma,WM, amyloidosis, and ML) within 10 years.
Bone marrow biopsy and aspirate show a mild increase in plasma cells, but no mass lesion as would be seen in myeloma. The lack of significant lymphadenopathy, organomegaly, and renal disease argues against myeloma, Waldenstroms, heavy chain disease, and amyloidosis. Other studies might include immunoelectrophoresis and immunofixation electrophoresis

Table 5. Differential Diagnosis in Plasma-Cell Disorders
Disorder Symptoms Clinical/routine laboratory findings
Monoclonal gammopathy of undetermined significance Asymptomatic or may have peripheral neuropathy None; or may be associated with peripheral neuropathy
Smoldering multiple myeloma Symptoms absent or minimal Lytic bone lesions few or none; anemia mild or absent; hypercalcemia, renal failure, recurrent infections absent
Plasma-cell leukemia Weakness, fatigue Meningeal symptoms sometimes seen (secondary form) >20% plasma cells in peripheral blood; hepatosplenomegaly, lymphadenopathy; fewer lytic bone lesions (primary form)
Osteosclerotic myeloma (POEMS syndrome) Sensorimotor polyneuropathy, amenorrhea (women), impotence (men), fever Sclerotic skeletal lesions; hepatomegaly, lymphadenopathy, splenomegaly; gynecomastia (men), hyperprolactinemia, papilledema, elevated CSF pressure, type 2 diabetes mellitus, hypothyroidism, adrenal insufficiency; skin thickening, hyperpigmentation, hypertrichosis, digital clubbing; peripheral edema, ascites, pleural effusion, thrombocytosis, erythrocytosis
Solitary plasmacytoma of bone Bone pain Palpable mass, bony tenderness
Extramedullary plasmacytoma Symptoms related to site of involvement: e.g., upper-airway obstruction Tumor with no evidence of multiple myeloma
Primary amyloidosis Carpal tunnel syndrome, orthostatic hypotension, peripheral neuropathy, malabsorption, nonthrombocytopenic purpura, articular infiltration ("football shoulder") Macroglossia, cardiomegaly, hepatomegaly; elevated blood urea nitrogen, creatinine. Similar features in myeloma-associated secondary amyloidosis.
Gamma heavy-chain disease (Franklin's disease) Fever, malaise, weakness, recurrent infections Palatal edema in Waldeyer's ring, lymphadenopathy, anemia, hepatosplenomegaly; occasionally thrombocytopenia, eosinophilia
Alpha heavy-chain disease (Seligmann's disease) Chronic diarrhea, malabsorption, weight loss Signs of

malnutrition, clubbed fingers; imaging studies reveal abdominal lymphadenopathy
Mu heavy-chain disease Monoclonal lymphocytosis lymphadenopathy, splenomegaly, occasionally hepatomegaly

What is more characteristic of Hodgkin's disease than of non-Hodgkin's lymphoma?

A. leukemic phase
B. nasopharnygeal involvement at onset
C. younger age peak
D. extranodal involvement

Answer is C. Hodgkins lymphoma is most frequent in the 20-30 age range.
Non-Hodgkins lymphomas frequently present as extranodal disease and some may have peripheral blood involvement.

A twenty-five year old man complains of a lump in his right neck. The lump has increased in size in the past seven weeks. He has lost weight - 12 lbs. in the last month and 20 in the last 6 months. His only medication is Tylenol for fever (101). He is HIV positive.
You obtain a chest roentgenogram which shows mediastinal widening and hilar lymphadenopathy. Lymph node and bone marrow biopsies are both positive for mixed cellularity Hodgkin's disease.
With the results of this information you make the following comments about HD in HIV+ patients, all of which are true EXCEPT for:

A. there is a higher incidence of HD compared to nonHIV+
individuals
B. HD is likely to present in advanced stages
C. mixed cellularity type is more common
D. extranodal sites of presentation are common
E. the clinical course is aggressive A twenty-five year old man complains of a lump in his right neck. The lump has increased in size in the past seven weeks. He has lost weight - 12 lbs. in the last month and 20 in the last 6 months. His only medication is Tylenol for fever (101). He is HIV positive.
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individuals
B. HD is likely to present in advanced stages
C. mixed cellularity type is more common
D. extranodal sites of presentation are common
E. the clinical course is aggressive

A

1. HIV-infected people are at a slightly higher risk for developing NHL than non-HIV-infected people. NHL can also progress (get worse) faster in HIV-positive people and can be more difficult to treat. It is not clear if HIV-positive people are at a higher risk for developing HD.

   2. However, HD does occur in HIV-infected people and, because of underlying immune suppression, can progress faster and may be more difficult to treat.

   3 Unfortunately, the availability of anti-HIV therapy has not reduced the risk of developing lymphoma.

A 61-year-old man has a platelet count of 360 x10 /L, a WBC count of 36 x 10 /L with 35% lymphocytes and an autoimmune hemolytic anemia most likely has:

A. a clonal rearrangement of the JH region of the lymphocytes
B. an relative lymphocytosis
C. a T-gamma lymphocytosis
D. Sezary syndrome
E. Adult T-cell leukemia/lymphoma

Answer is E. CLL is the most common of the malignant clonal chronic lymphoproliferative disorders, representing about 30% of all leukemia. CLL is a proliferation of lymphocytes, in the marrow, peripheral blood, and various organs. The most characteristic feature of CLL is a peripheral blood absolute lymphocytosis (>5.0 x109/L). Lymphadenopathy and splenomegaly are common especially late in the disease. Anemia and thrombocytosis may indicate marrow replacement or autoimmune destruction

A 55-year-old man complains of dizziness, headaches and pruritis after showering. He notes early satiety and smokes ‰ 1 pack of cigarettes/day x 30 years.
On physical examination you find a middle aged man with a ruddy complexion, mild hypertension, and mild spenomegaly.
Clinically you suspect polycythemia and order an erythropoietin level. Based on the above clinical information what is your diagnosis:

A. Polycythemia vera and normal erythropoietin
B. Polycythemia vera and increased erythropoietin
C. Secondary polycythemia and normal erythropoietin
D. Secondary polycythemia and increased erythropoietin

Answer is A. Splenomegaly, pruritis, hypertension, ruddy facial features, dizziness and headaches are common symptoms in polycythemia. The splenomegaly and pruritis are common in polycythemia vera, but are usually absent in secondary polycythemia.
Erythropoietin levels are low or normal in polycythemia vera and high in secondary polycythemia vera.

ccs case,sickle cell crisis. **according to the washington manual**

tx.of sickle cell anemia
1.RBC transfusion
Ix; stroke, TIA, acute chest syndrome, priapism unresponsive to supportive care and in preparation for anesthesia
2.hydroxyurea(15-35mg/kg po qd)
increase levels of fetal Hb and todecrease the incidence of vasoocclusive pain episodes by approximately 50% in adults with sickle cell anemia
3.BMT
RBC transfusion will not change the immediated course of an acute pain crisis, morphine is the drug of choice for moderate or severe pain

A 72-year-old retired salesman has had heartburn symptoms once or twice a week for the past several years. He has taken antacids on occasion with some symptom relief. He has some regurgitation once or twice per week. He denies any dysphagia or weight loss. Of note, he has worsening hypertension. A calcium channel blocker was

added to his diuretic to attain better blood pressure control. Yesterday, he watched his favorite baseball team lose in the divisional playoffs, and after the Buffalo wings, chips, salsa, and 10 beers, he developed an “ache” in the substernal region with no associated symptoms. He presents to the local emergency room. The physical examination shows the following:

Vital signs: afebrile; heart rate = 84/min; respiratory rate = 16/min; blood pressure = 156/98 mm Hg

Cardiovascular examination: regular rate and rhythm; S1, S2 normal

Pulmonary examination: lungs clear to auscultation

Abdominal examination: (+) bowel sounds; soft/nontender without organomegaly

ECG: normal sinus rhythm without changes consistent with ischemia.

The emergency room physician adds nitrates to the regimen. However, the frequency and severity of the chest ache increases, lasting for minutes and occurring twice an hour. Cardiac enzymes are equivocal. The emergency room physician calls a cardiology consultation. Cardiac catheterization is performed and reveals minimal luminal irregularities in coronary arteries. There is no clinically significant coronary artery disease. The patient is considered for referral to a gastroenterologist.

What is the most likely cause of this man's symptoms?

A: Coronary artery disease
B: Pneumonia
C: Cholecystitis
D: Gastroesophageal reflux disease (GERD)
E: Musculoskeletal pain

Answer is D. With this patient’s history of heartburn and acid regurgitation coupled with a normal cardiac workup, no evidence of muscular strain, no fevers or dyspnea that would be consistent with pneumonia, and a normal ultrasound making cholecystitis unlikely, GERD is the most likely diagnosis.
GERD is one of the most common medical problems seen in clinical practice today. An estimated 4% to 7% of American adults experience GERD-related heartburn or acid regurgitation daily, 10% to 14% experience these symptoms weekly, and 15% to 44% experience them monthly. Angina-like chest pain is one of the symptoms that can occur with GERD.

A: Coronary artery disease - MI dx.: cardiac enzyme+, specific hx.+, EKG finding+ -all of these are not met, even angina, no nitrate response, cardiac catheterization-, even if variant spasm, he already took calcium channel blocker
B: Pneumonia - no fever, no resp.sx., no specific P/Ex.
C: Cholecystitis - no fever, no Murphy's sign, unfitted G-I sx.and hx.
D: Gastroesophageal reflux disease (GERD)
E: Musculoskeletal pain - no specific physical exam.

The most common bacterial pathogen involved with acute bacterial rhinosinusitis is:

A. Type B Haemophilus influenzae
B. Mycoplasma pneumoniae
C. Streptococcus pneumoniae
D. Streptococcus pyogenes
E. Moraxella catarrhalis

C

S. pneumoniae (41%)
H. influenzae (35%)
Moraxella catarrhalis (4%),
Staphylococcus aureus (3%).

Treatment

More than 70% of acute rhinosinusitis is caused by S. pneumoniae and H. influenzae.
high-dose amoxicillin

In the United States, the primary means for prevention of sporadic meningococcal disease is antimicrobial chemoprophylaxis. Indications for such prophylaxis is not indicated for

a) household members
b) day care center contacts
c) anyone directly exposed to the patient's oral secretions (e.g., through kissing,mouth-to-mouth resuscitation, endotracheal intubation, or endotracheal tube management)
d) pregnant women

Answer is D. In the United States, the primary means for prevention of sporadic meningococcal disease is antimicrobial chemoprophylaxis of close contacts of infected persons. Close contacts include a) household members, b) day care center contacts,
and c) anyone directly exposed to the patient’s oral secretions (e.g., through kissing,
mouth-to-mouth resuscitation, endotracheal intubation, or endotracheal tube management).

The primary means for the prevention of meningococcal disease in the United States is antimicrobial prophylaxis of close contacts of persons diagnosed with meningococcal disease. Close contacts include household members, daycare center contacts and anyone directly exposed to the patient's oral secretions. a.vaccination should be considered on adjuvant ot antibiotic chemoprophylaxis for household or intimate cotacts of meningococcal disease cases
b.Chemoprophylaxis of healthcare workers is generally not indicated unless the worker has been exposed to the patient's respiratory secretions through mouth-to mouth resuscitation, endotracheal intubation or care.
Because the attack rate of meningitis in contacts of cases is highest during the first few days after onset of disease in an index case, chemoprophylaxis should be administered to appropriate contacts as soon as possible, ideally within 24 hours after identifying a case. Colonization of otherwise healthy individuals with N. meningiditis is well recognized, has been noted in up to 40% of the population at times, and is not considered an indication for chemoprophylaxis.

c.it is not live vaccine, should be considered during pregnancy

A 42-year-old man with no prior history of major illness is admitted with melena, Hb of 9.0, and coffee-ground vomitus. His stomach clears on gastric lavage. He is hemodynamically stable. On endoscopy he has a 7-mm clean-based duodenal ulcer without dark spots or visible vessel. A slide test for urease is positive on a biopsy specimen from the gastric antrum.
Which of the following would be the most appropriate treatment plan for this patient after endoscopy?

a. Intravenous (IV) H2-blockers, NPO for 24 hours, followed by clear liquid diet with progression to full diet, and then discharge within 72 hours with treatment of oral drug therapy for 8 weeks
b. Oral H2-blockers, clear liquid diet for 24 hours with progression to full diet, and then discharge within 72 hours with continued drug therapy for 8 weeks
c. Proton pump inhibitors twice daily, clear liquid diet for 24 hours, and then discharge with continued drug therapy for 1 month
d. Treatment for Helicobacter pylori for 2 weeks, followed by discharge within 24 hours on a regular diet
e. Proton pump inhibitors for 4 to 8 weeks, treatment for H. pylori for 2 weeks, regular diet, and discharge within 24 hours

The correct answer is e.
e. Patients who bleed from peptic ulcer disease and who have a clean-based ulcer at endoscopy have a less than 5% chance of rebleeding. They may be treated with any appropriate acid-reducing regimen for peptic ulcer and then be discharged within 24 hours. If gastric mucosa is tested for urease activity, implying the presence of Helicobacter pylori, the patient should be treated with an appropriate regimen.
Although proton pump inhibitors have some anti-Helicobacter activity, when used alone they are insufficient treatment for the infection. If the urease slide test of the gastric biopsy (such as the CLOTEST®) is negative, a fasting serum gastrin is warranted, especially in the absence of a history of NSAID (nonsteroidal antiinflammatory drug) usage. If on endoscopy the patient has a visible vessel or clot, the percentage of

rebleeding is high and more careful monitoring is needed; endoscopic therapy may be appropriate. Acid reduction therapy with H2-blockers or proton pump inhibitors should be used to treat the ulcer(s) in addition to the anti-H. pylori antimicrobial therapy. (Yamada T et al. Textbook of Gastroenterology, 2nd ed. Philadelphia: JB Lippincott, 1995; Laine L and Peterson WL. Medical progress: Bleeding peptic ulcer. N Engl J Med 1994;331:717–727

A 67-year-old woman who is a regular patient calls the office because she has developed severe muscle weakness, muscle cramps and polyuria. She began treatment 6 weeks ago with 50 mg of chlorthalidone daily for mild-to-moderate essential hypertension. The most likely explanation for her symptoms is the development of

(A) hypokalemia
(B) hypomagnesemia
(C) hyponatremia
(D) metabolic acidosis
(E) type 2 diabetes mellitus

A

Hypokalemia is a very common side effect of non-potassium-sparing diuretics (e.g., chlorthalidone). This is often more pronounced in the older age group. Patients usually complain of muscle weakness, fatigue, and cramps. Constipation and ileus characterize the
smooth muscle involvement, whereas hyporeflexia, flaccid paralysis, and tetany are signs of severe hypokalemia.

it is thiazide diurtics...
side effect: weakness, muscle cramps, and impotence
metabolic; hypoKa, hypoMg, hyperlipidemia(increases LDL and TG),hyperCa, hypoNa, hyperglycemia,hyperuremia
Thiazide-related pancreatitis has been reported

A 50-year-old African-American man with severe chronic obstructive pulmonary disease returns to the office following a recent evaluation for possible lung transplantation in another city. He says he had been considered a suitable candidate, in all respects, but was rejected by the transplant program when a random urine test was positive for a nicotine metabolite. He had previously told you that he had stopped smoking 3 years ago. He stands by this and is at a loss to explain the positive urine test. He wants to know what he should do now. At this time you should

(A) advise him again to stop smoking and refer him to another transplant program
(B) advise him that the transplant program cannot turn him down on this basis, according to the Americans with Disabilities Act
(C) contact the transplant program to learn their reasons for turning him down
(D) explain to the patient that transplantation is out of the question as a result of what has occurred
(E) write to the transplant program and insist that they give him another opportunity

C

Current Contraindications to Lung Transplantation:

1.Major Organ Dysfunction: especially renal or cardiac disease.

2.Infection with HIV.

3.Active Malignancy.

4.Hepatitis B antigen positive.

5.Hepatitis C with liver damage on biopsy.

Pre-Referral Investigations:

Full Pulmonary Function Studies.

Exercise Performance measurement.

Electrocardiogram and Echocardiogram.

High Resolution CT Scan of Chest.

Stress Echocardiogram or Coronary Angiography.

24-hour creatinine clearance.

Liver Function Studies.

General Medical Conditions that Effect Eligibility for Lung Transplantation:

Symptomatic Osteoporosis: Relative Contraindication.

Kyphoscoliosis: Relative Contraindication.

Progressive Neuromuscular Disease: Absolute Contraindication.

Current use of Corticosteroids: dose of 20mg prednisone or less.

Ideal Body Weight between 70 and 130% of predicted.

Psychosocial issues: Noncompliance with medical care is a Relative Contraindication.

Requirement for invasive ventilation: Relative Contraindication.

Colonization with Fungi, Atypical AFB or adequately treated MTB- not a contraindication.

A male colleague asks you to write a prescription for a narcotic analgesic for one of his female patients. You have noticed that this patient frequently has been coming by the office to see your colleague, and that several of the visits have been marked “No Charge.” When you ask your colleague why he cannot write the prescription himself, he seems defensive and says, “because I don't want anybody to get the wrong idea.” The most appropriate response to your
colleague is:

(A) “It sounds like there is more to this story than you are telling me; maybe we should talk about it.”
(B) “I wish I could help you, but I never prescribe that medication for a patient unless I have seen the patient myself.”
(C) “I will do this for you once, but I will need to see your patient in the office before I can write another prescription.”
(D) “Maybe I should see your patient in the office myself, and then decide if she needs the medication.”
(E) “You have seemed a little nervous lately. You aren't getting in over your head, are you?”

A

A 2-year-old boy is brought to the emergency department by his mother because of a large laceration on his hand. The mother says "He is always playing with knives and is so careless. That's probably how he got hurt this time." On physical examination the patient appears unkempt. There is a 4-cm laceration on the palmar aspect of his left hand. Child abuse is suspected. In addition to referral to the child protective services, management should include each of the following EXCEPT

A. careful review of the patient's hospital records
B. direct confrontation of the accompanying parent
C. a nonjudgmental elicitation of the circumstances of the injury
D. thorough physical examination
E. x-ray film survey of the long bones

B

A 45-year-old African-American man comes to the office for the first time because he says, "I had blood in my urine when I went to the bathroom this morning." He reports no other symptoms. On physical examination his kidneys are palpable bilaterally and he has mild hypertension. The information in his history that is most pertinent to his current condition is

A. chronic use of analgesics
B. cigarette smoking
C. a family history of renal disease
D. occupational exposure to carbon tetrachloride
E. recent sore throats

C

adult type(most common) PKD-A.D.
flank pain,vague abdominal complaints, symptoms of UTI,episodes of gross hematuria and the incidental discovery of hypertension are common presenting problems
in contrast, a sense of abdominal fullness due to enlarged kidney occurs relatively late in the course of the disease

A 42-year-old-sexually active female presents with low-grade fever, headache, malaise, dysuria, and vaginal discharge. Physical examination reveals several vesicular lesions on the labia bilaterally. She also has tender inguinal lymphadenopathy. All the following statements regarding the current situation are correct EXCEPT

A oral acyclovir will be effective in speeding the resolution of her symptoms
B if the patient has had prior HSV-1 infection, she will be less likely to have severe systemic symptoms
C recurrent infection will be equally likely whether the patient is infected with HSV-1 or HSV-2
D if her sexual partner uses a condom, transmission will be less likely
E prolonged acyclovir use could reduce the likelihood of recurrent infection

C

when it comes to recurrence,
80% of persons having a first episode caused by HSV-2 will have at least one recurrence
50% of persons with HSV-1 will experience a recurrence
The most common scenario is occasional recurrences (about 4 attacks per year)
Usually, the first year has the most viral activity
recurrence has also prodromal sx., less severe
one having previous HSV-1infection has less severe sx.
continuous acyclovir 400mg po qd-prophylactic use

Which of the following statements concerning the diagnosis of pheochromocytoma is correct?

A Measurement of plasma catecholamines is the preferred initial screening test
B Random urine samples are equivalent in diagnostic accuracy to the measurement of catecholamines or catecholamine metabolites in a 24-h urine collection
C After collection, the urine should be treated with dilute sodium hydroxide and refrigerated
D The ideal time to collect urine is during a period of clinical stability
E Strenuous exertion may falsely elevate the level of free urinary catecholamines

The answer is E

Since provocative testing plays a very small role in the diagnosis of pheochromocytoma, the most frequently employed assays include measurement of catecholamines or catecholamine metabolites in a single 24-h urine sample. The three assays used include measurement of vanillylmandelic acid, metanephrines, and unconjugated ("free") catecholamines. Accuracy of diagnosis depends on the collection of a full 24-h urine sample that is treated with acid and refrigerated during and after the collection. The diagnostic yield would be increased if the 24-h urine collection included a time period during which the patient experienced a hypertensive paroxysm. False-positive increases in urinary free catecholamine excretion may occur if the patient is taking methyldopa, levodopa, or sympathomimetic amines. Endogenous plasma and urinary catecholamines also may be increased during hypoglycemia, strenuous exercise, and significant central nervous system disease. Urinary metanephrines and vanillylmandelic acid are also falsely positive in situations in which endogenous catecholamines may be increased or if the patient is receiving a monoamine oxidase inhibitor. Since plasma catecholamines are highly subject to endogenous variation in catecholamine secretion, they have not been particularly useful as an initial screening test for the diagnosis of pheochromocytoma.

taken from mdconult .com

Urinary catecholamines and metabolites (24-hr sample or 2-hr sample after a paroxysm; metanephrines, the initial screening test)
Plasma catecholamines (if urinary values are equivocal; take care to obtain a basal, resting sample)

The use of repeated phlebotomy in the treatment of persons with symptomatic hemochromatosis may be expected to result in

A increased skin pigmentation
B improved cardiac function
C return of secondary sex characteristics
D decreased joint pain
E an unchanged 5-year survival rate

The answer is B
In persons with symptomatic hemochromatosis, repeated phlebotomy, by removing excessive iron stores, results in marked clinical improvement. Specifically, the liver and spleen decrease in size, liver function improves, cardiac failure is reversed, and skin pigmentation ("bronzing") diminishes. Carbohydrate intolerance may abate in up to half of all affected persons. For unknown reasons, there is no improvement in the arthropathy or hypogonadism (resulting from pituitary deposition of iron) associated with hemochromatosis. The 5-year survival rate increases from 33 to 90 percent with treatment; prolonged survival may actually increase the risk of hepatocellular carcinoma, which affects one-third of persons treated for hemochromatosis. However, if phlebotomy is begun in the precirrhotic stage, which is possible with effective genetic screening, liver cancer will not develop.

early phlebotomy :
it can prevent most late symptoms and complications. Even when started after complications have occurred, phlebotomy can decrease symptoms and improve life expectancy. early phlebotomy :
it can prevent most late symptoms and complications. Even when started after complications have occurred, phlebotomy can decrease symptoms and improve life expectancy.

Initial Antimicrobial Therapy

Initial Antimicrobial Therapy for Severe Sepsis with No Obvious Source in Adults with Normal Renal Function

Immunocompetent adult

The many acceptable regimens include (1) ceftriaxone (1 g q12h) or ticarcillin-clavulanate (3.1 g q4-6h) or piperacillin-tazobactam (3.75 g q4-6h); (2) imipenem-cilastatin (0.5 g q6h) or meropenem (1 g q8h). Gentamicin or tobramycin (5 mg/kg q24h) may be added to either regimen. If the patient is allergic to -lactam agents, use ciprofloxacin (400 mg q12h) plus clindamycin (600 mg q8h). If the institution has a high incidence of MRSA infections, add vancomycin (15 mg/kg q12h) to each of the above regimens.

Neutropeniaa (<500 neutrophils/L)

Regimens include (1) ceftazidime (2 g q8h) or ticarcillin-clavulanate (3.1 g q4h) or piperacillin-tazobactam (3.75 g q4h) plus tobramycin (5 mg/kg q24h); (2) imipenem-cilastatin (0.5 g q6h) or meropenem (1 g q8h) or ceftazidime or cefepime (2 g q12h). Vancomycin (15 mg/kg q12h) and ceftazidime should be used if the patient has an infected vascular catheter, if staphylococci are suspected, if the patient has received quinolone prophylaxis, if the patient has received intensive chemotherapy that produces mucosal damage, or if the institution has a high incidence of MRSA infections.

Splenectomy

Cefotaxime (2 g q6-8h) or ceftriaxone (2 g q12h) should be used. If the local prevalence of cephalosporin-resistant pneumococci is high, add vancomycin. If the patient is allergic to -lactam drugs, vancomycin (15 mg/kg q12h) plus ciprofloxacin (400 mg q12h) or aztreonam (2 g q8h) should be used.

IV drug user

Nafcillin or oxacillin (2 g q4h) plus gentamicin (5 mg/kg q24h). If the local prevalence of MRSA is high or if the patient is allergic to -lactam drugs, vancomycin (15 mg/kg q12h) with gentamicin should be used.

AIDS

Ceftazidime (2 g q8h), ticarcillin-clavulanate (3.1 g q4h), or piperacillin-tazobactam (3.75 g q4h) plus tobramycin (5 mg/kg q24h) should be used. If the patient is allergic to -lactam drugs, ciprofloxacin (400 mg q12h) plus vancomycin (15 mg/kg q12h) plus tobramycin should be used.

A 65-year-old man presents to you for preoperative workup before undergoing aortic valve replacement for aortic regurgitation (indicated because of progressive left ventricular dysfunction, as revealed on echocardiogram) and coronary artery bypass surgery. He is interested in autologous blood donation. He has had chronic stable angina for the past 2 years, which is brought on by maximal exertion; his angina has remained unchanged for 1 year. For the past 2 days he has had increased urgency for urination and dysuria. On physical examination, he has a 2/4 diastolic murmur and suprapubic tenderness; otherwise, his examination is normal.
What absolute contraindication to autologous blood donation does this man have?

A:Angina
B:Aortic regurgitation
C:Active bacterial infection
D:Age older than 60 years

Answer is C. Active bacterial infection is a contraindictaion.
Autologous blood transfusion is a general term used to describe a procedure by which previously donated (or shed) blood is transfused (or re-infused) into the same donor or patient. A substantial proportion of patients who require blood are not candidates for autologous blood donation; for example, those with acute or chronic anemia; those with active infection; those requiring urgent surgery; small children; and some patients who require cancer surgery.

A 79-year-old woman presents to your office on three separate occasions with the following average blood pressures: 190/82 mmHg, 192/76 mmHg, 194/78 mmHg. Which of the following is NOT likely to be affected by treating the patient's systolic hypertension?

a. The incidence of myocardial infarction
b. The risk for stroke
c. The incidence of left ventricular failure
d. The risk of hypertensive crisis

The answer is D. The Systolic Hypertension in the Elderly Program demonstrated that treatment of isolated systolic hypertension results in a significant decrease in the risk of stroke, the incidence of myocardial infarction, and the incidence of left ventricular failure in persons aged 60 or over. However, such treatment has not been shown to reduce the incidence of hypertensive crisis. Treatment options for isolated systolic hypertension follow the same guidelines as for systolic-diastolic hypertension. Treatment begins with nonpharmacologic therapies, including salt restriction and weight loss. Pharmacologic therapy is initited with diurectics or beta-blockers. Although overly aggressive salt restriction may be hazardous in some older adults, reduction in dietary salt intake in this case is the most reasonable initial choice.

Which one of the following tests is not always recommended in the work-up of a patient suspected of having dementia?

A. Complete blood count.
B. Imaging test of the central nervous system (computed tomography or magnetic resonance imaging).
C. Mini-Mental State Examination (or other cognitive test).
D. Liver function tests.
E. Urinalysis.

Answer is B. Tests recommended for the diagnostic work-up of dementia include a complete blood cell count (to exclude anemia and infection), urinalysis (to exclude infection), serum electrolyte, glucose and calcium levels, blood urea nitrogen, serum creatinine level and liver function tests (to investigate metabolic disease). Syphilis serology, erythrocyte sedimentation rate, serum folate level, human immunodeficiency virus (HIV) status, urine check for heavy metals and toxicology screening may be indicated in a minority of cases.
The utility of computed tomography or magnetic resonance imaging to rule out vascular disease, tumor, subdural hematoma or normal-pressure hydrocephalus remains controversial. Radiologic imaging of the central nervous system is probably not necessary in patients presenting with dementia, unless localizing neurologic signs or symptoms are noted.

Migraine with aura has which one of the following features?

A. Ipsilateral lacrimation or nasal congestion.
B. Irreversible aural symptoms indicating focal cerebrocortical or brain-stem dysfunction.
C. Reversible aura symptoms and headache with a pulsating quality.
D. Pressing or tightening quality.
E. Recurrent syncopal episodes.

C

Migraine with aura

A.At least two attacks fulfilling criterion B
B.At least three of the following characteristics:
1.One or more fully reversible aura symptoms indicating focal cerebral cortical and/or brain-stem dysfunction
2.At least one aura symptom develops gradually over more than 4 minutes, or two or more symptoms occur in succession.
3.No aura symptom lasts more than 60 minutes; if more than one aura symptom is present, accepted duration is proportionally increased.
4.Headache follows aura, with a free interval of less than 60 minutes (headache may also begin before or simultaneously with aura).

A 22-year-old gravida 2, para 1 woman with an uncomplicated antepartum course (including a screening one-hour glucose tolerance test at 28 weeks of gestation) presents for follow up. She is at 39 weeks of gestation. The birth weight of her first child was 3,500 g (7 lb, 11 oz) and the delivery was uncomplicated. On examination, estimated fetal weight by Leopold maneuver is 4,000 g (8 lb, 13 oz). The patient is concerned and wants advice about induction of labor. Which one of the following statements about induction is the most accurate?

A. Early induction increases the rate of cesarean section without favorably altering perinatal outcomes.

B. Early induction increases the rate of cesarean section and favorably alters perinatal outcomes.
C. Early induction decreases the rate of cesarean section.
D. Early induction does not affect the rate of cesarean section.

Answer is A. Given that the fetus continues to gain about 230 g (8.1 oz) per week after the 37th week, elective induction of labor before or near term has been suggested to prevent macrosomia and its complications. However, observational studies suggest that induction actually increases the cesarean section rate without favorably altering perinatal outcomes.

Ref: American Academy of Family Medicine

fetal macrosomia>4,500g
a birth weight of greater than 4,000g is also used by many clinicians and researchers to define macrosomia.
because of the risk for birth trauma and failure to progress in labor secondary to CPD, LGA pregnancies are often induced before the fetus can attain macrosomic status.
the risk for this course of action is increased rate of C/S for failed induction and prematurity in poorly dated pregnancy.
VD of the suspected macrosomic infant involves preparing for a shoulder dystocia....