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QUESTION 1

A24-year-old male medical student is admitted to the hospital for the evaluation of a 3-month history of bloody stools. The patient has approximately six blood stained or blood streaked stools per day, associated with relatively little, if any, pain. He has not had any weight loss, and he has been able to attend classes without interruption. He denies any fecal incontinence. He has no prior medical history. Review of systems is remarkable only for occasional fevers and the fact that the patient quit smoking approximately 8 months ago. A colonoscopy is performed and reveals a granular, friable colonic mucosal surface with loss of normal vascular pattern from the anal verge to the hepatic flexure of the colon. Biopsies reveal prominent neutrophils in the epithelium and cryptitis with focal crypt abscesses, and no dysplasia. The patient is diagnosed with ulcerative colitis.

In addition to an increased lifetime risk of colon cancer, the patient is also at increased risk for which of the following tumors?

A. hepatocellular carcinoma

B. hepatoblastoma

C. desmoid tumors

D. small bowel lymphoma

E. cholangiocarcinoma

Correct Answer: E Section: (none)

Explanation:

Oral corticosteroids are a mainstay of firstline treatment for moderate-to-severe ulcerative colitis. Starting doses of 40 mg PO daily of prednisone, with a slow taper, are often effective in reducing colonic inflammation, although some patients are unable to wean steroids or maintain remission once achieved. The patient does not have dysplasia in any biopsy specimens, nor does he have signs of systemic toxicity, so a colectomy would be premature. Oral metronidazole is ineffective in ulcerative colitis. Cortisone enemas would be helpful if the patient had isolated left-sided disease, but it is doubtful that enema therapy would reach his hepatic flexure. Intravenous cyclosporine would be used in severe colitis as a last measure before colectomy but this patient is not yet sick enough to warrant such therapy. PSC occurs in approximately 3% of patients with ulcerative colitis and is its major liver complication. It is a chronic inflammatory condition of the biliary tree. It can typically manifest with elevated alkaline phosphatase and bilirubin levels, and results in diffuse stricturing and pruning of the biliary tree. Wilson disease, hereditary hemochromatosis and alpha-1 antitrypsin deficiency are not associated with ulcerative colitis and are not cholestatic liver diseases. Primary biliary cirrhosis could account for these laboratory findings, but is rare in both males and patients with ulcerative colitis. Patients with PSC are at increased risk of developing cholangiocarcinoma but not the other liver tumors mentioned. Patients with celiac sprue are at increased risk for small bowel cancers (adenocarcinoma, lymphoma). Patients with FAP are at increased risk to develop desmoid tumors.

QUESTION 2

You have been the geriatrician for a 79-year-old patient with a 10-year history of Alzheimer\\'s disease, diabetes mellitus, and coronary artery disease. His 75-year-old wife has been his caretaker in the home. In the last 3 months, he has become progressively more combative and violent toward his wife. He was recently discharged from the hospital after intravenous antibiotic therapy for pneumococcal pneumonia but had to be readmitted to the intensive care unit with resistant, pneumococcal bacteremia, altered mental status, renal insufficiency, hypotension, CHF, and hypoxemia.

When he was first aware of his early loss of memory, he told a family friend and his wife he would not want to be kept alive under such conditions. However, he did not execute an advanced directive. He does not have any surviving blood relatives and has no children. His wife refuses to sign the consent form to intubate her husband. Which of the following is the most appropriate action to take at this time?

A. Continue antibiotic therapy but don\\'t intubate the patient.

B. Send the wife home because of her emotional exhaustion.

C. Intubate the patient.

D. Request that a judge appoint a legal decision maker for the patient.

E. Write a Do Not Attempt Resuscitation (DNR) order.

Correct Answer: E Section: (none)

Explanation:

E. Medical care of the critically ill is focused on those individuals who, despite therapeutic interventions, may either recover with significant morbidity or die from their underlying illness. Part of the care of terminally ill patients is to ameliorate suffering, prevent disability, or recognize the finitude of life. The SUPPORT study provides physicians with accurate predictive information on the functional ability of patients and survival probability for end-oflife care. This study revealed that care provided to critically ill patients was often inconsistent with their preferences. Nearly half of the DNR orders were written in the last 2 days of life. In this clinical situation, the patient has multiple organ system failure with sepsis, acute respiratory failure, CHF, and altered mental status (coma). Although the physician could provide any of the medical interventions, he is aware of the patient\\'s preferences as expressed by an appropriate proxy decision maker (wife). Ethical justifications for DNR orders include: These decisions require cultural sensitivity and awareness of the variety of beliefs surrounding death among patients, their families, physicians, hospital systems, and society. Although physicians are best qualified to identify possible outcomes, it is patients and their families who determine the significance of these outcomes.

QUESTION 3

A 42 year old male admitted for pulmonary embolus was placed on heparin, dosed by a weight based protocol. However, later in the day, you receive a call from the floor nurse stating that the patient had spontaneous epistaxis and a very high aPTT. Use of which of the following would be best at this time?

A. cimetidine

B. heparinase

C. clofibrate

D. protamine sulfate

E. vitamin K

Correct Answer: D Section: (none)

Explanation:

Protamine sulfate is a strongly basic molecule that is thought to inhibit acidic heparin electrostatically. It may not, however, affect heparin-induced platelet aggregation. Cimetidine is an H2-antagonist that increases the anticoagulant response by an as yet unknown mechanism. Clofibrate is an agent used to reduce plasma lipid levels. Vitamin K is used to reverse the effect of warfarin. Heparinase is not used clinically.

QUESTION 4

A man who underwent total thyroidectomy 24 hours ago now complains of a generalized "tingling" sensation and muscle cramps. Appropriate treatment would include which of the following?

A. intravenous infusion of calcium gluconate

B. administration of oxygen by mask

C. administration of an anticonvulsant

D. administration of a tranquilizer

E. neurologic consultation

Correct Answer: A Section: (none)

Explanation:

During total thyroidectomy, parathyroid glands may inadvertently be removed or their vascular supply interrupted. Hypoparathyroidism may then develop, the manifestations of which include tingling, muscle cramps, convulsions, and a positive Chvostek\\'s sign (contraction of facial muscles after tapping the facial nerve). These symptoms are dramatically relieved by intravenous administration of calcium. Oral calcium and vitamin D are administered for long-term correction of hypocalcemia.

QUESTION 5

A 22-year-old female (G3P0020) presents to your office for an initial obstetric visit in her third pregnancy. She reports a sure LMP date approximately 6 weeks ago, with a history of regular cycles. Her two previous pregnancies ended in spontaneous abortions. She denies any significant medical or surgical history. She denies use of alcohol, tobacco, or illicit drugs, though she does report a history of IV drug use as a teenager. She is a full-time student. She reports that twins run in her family, but she does not have any family history of diabetes, hypertension, or congenital anomalies. On review of her prenatal labs that have already been drawn, you find that her human immunodeficiency virus (HIV) antibody test (enzyme-linked immunosorbent assay [ELISA]) is positive. Her test results are otherwise normal. Which of the following indicates how you counsel the patient?

A. This result is a false positive due to pregnancy, and she does not need any further testing.

B. She is infected with HIV and will need to begin treatment right away.

C. She will require an additional, confirmatory test to determine whether or not she has HIV.

D. She may have HIV, but she should wait until after she delivers her baby to have further testing.

E. Because it has been years since she participated in high-risk behaviors, she is unlikely to have HIV.

Correct Answer: C Section: (none)

Explanation:

Screening for HIV should be offered to all pregnant women as part of routine prenatal care. Screening for HIV infection is done using an enzyme immunoassay (EIA). If the screening test is positive, it may be repeated. Once the screening test is determined to be positive, a Western blot assay or immunofluorescent antibody assay (IFA) is done as a confirmatory test. If the confirmatory test is positive, the patient is then considered to be infected with HIV. Pregnant patients should be treated for HIV by the same standards as any other adult with HIV, though some consideration is given to selection of antiretroviral medications that are safest in pregnancy. Appropriate HIV-related care should not be deferred because of pregnancy. For patients with significant HIV disease, the combination of elective scheduled cesarean and antiretroviral therapy has been shown to be more effective than antiretrovirals alone at reducing perinatal transmission of HIV. In the absence of any therapy, the risk of vertical transmission is estimated at 25%. With zidovudine therapy, the risk is decreased to approximately 58%. When zidovudine is given in combination with elective cesarean for appropriate patients, the risk is decreased to approximately 2%. In a recent meta-analysis, perinatal transmission occurred in only 1% of treated women with RNA viral loads less than 1000 copies/ mL. Given the low risk of transmission in this group, it is unclear whether cesarean delivery would provide additional benefit. After reviewing this data, the American College of Obstetricians and Gynecologists Committee on Obstetric Practice has issued a Committee Opinion concerning route of delivery, recommending consideration of scheduled cesarean delivery for HIV-1-infected pregnant women with HIV1 RNA levels >1000 copies/mL near the time of delivery.

QUESTION 6

A husband and wife, both aged 30, come to the community health center for advice and evaluation prior to a month-long mission trip to central Africa. Both are in good health. She takes oral contraceptive pills and he is on no prescription medication. Review of their records shows that they have had all of the appropriate vaccinations for their ages, have completed a three dose hepatitis B series and had dT boosters 2 years ago. Their mission will involve building a school and health clinic in a rural area of Cameroon. How would you advise them regarding food safety?

A. Carbonated soft drinks served with ice cubes are considered safe to drink.

B. Locally grown oranges and bananas are safe to eat.

C. Water is safe to drink after filtering through an absolute 1 m filter.

D. Brushing teeth with untreated water is safe as long as it is not swallowed.

E. Salads are generally safer to eat than cooked meats.

Correct Answer: B Section: (none)

Explanation:

Encounters with persons traveling to other countries are common in primary care or community health settings. The advice and interventions provided are dependent on where the person is going, what he or she will be doing, and for how long he or she will be there. The most accessible and up-to-date source of this information in the United States is at the Centers for Disease Control web site, which provides detailed recommendations on vaccinations, health, and safety risks involved in overseas travel. In this series of questions, the travelers are going to the region of central Africa and, more specifically, to a rural area of Cameroon. This is an area of the world where polio remains a risk. As most Americans have not been vaccinated against polio since childhood, booster immunization against polio is recommended. The injectable polio vaccine is recommended as it does not carry with it the risk of vaccine-induced

disease that the oral (live virus) vaccine does. Smallpox has been eliminated as a naturally occurring disease, although it remains of importance in bioterrorism discussions. The smallpox vaccine is not necessary for travel to any part of the world, but is used by the military or medical first responders who may be exposed in the event of a biowarfare attack. The traveling couple is up-to-date on their dT status with boosters within the past 2 years. They have completed a series of both MMR and hepatitis B, which is felt to confer lifetime immunity. Malaria prevention is an important consideration for travel to many areas of the developing world. Different regimens may be used depending on the area to which the travel will occur. All regimens, however, require the institution of prophylaxis prior to travel and the continuation of prophylaxis for up to 4 weeks after completion of travel. This is due to the life cycle of organisms that cause the disease. Prevention of malaria also involves attempts to reduce one\\'s risk of exposure to the Ixodes mosquito which can transmit the disease. This mosquito tends to be more active early in the morning and at dusk, and less active in the middle of the day. Wearing long sleeved clothing, using mosquito nets, and insect repellent is important. DEET-containing insect repellents are recommended as the most effective products available and are safe when used appropriately. The most common cause of injury during travel is motor vehicle accidents. The risk of injury is higher in many developing countries than in the United States due to poor roads, poor vehicle maintenance, lack of seat belts, and other issues. Very cautious driving and avoidance of driving after dark may help to reduce the risk somewhat. While swimming is an ideal exercise in such hot climates as central Africa, freshwater lake swimming should be avoided due to the risk of exposure to schistosomiasis. The Schistosoma species that cause this disease are endemic in standing freshwater bodies. Swimming or bathing in salt water or chlorinated swimming pools is safer. Traveler\\'s diarrhea and exposure to foodborne pathogens is a common cause of illness during travel to developing countries. The guideline with food is to cook it, peel it, purify it, or forget it. Fruits that can be peeled, such as oranges or bananas, are generally safe to eat. Carbonated beverages are also safe. However, ice cubes made from local water supplies are a common, and sometimes ignored, source of infection. Water purification can be accomplished by boiling or by filtering through an absolute 1 m filter and then purifying with iodine. Filtering alone does not provide adequate protection. Salads that are not made of carefully cleaned vegetables should be avoided and salad dressings may also be contaminated. Meats that are well cooked and served hot would be considered less likely to transmit an infection. Finally, brushing one\\'s teeth with unpurified water carries a significant risk of transmission of waterborne illness and should be avoided. Purified water or bottled water should be used instead.

QUESTION 7

A70-year-old White woman has been faithful about taking 1200 mg of calcium, 400 IU of vitamin D supplements, and performing weight-bearing exercise on a daily basis. Her hip T score from her current DEXA scan has changed from -2.0 SDs to -2.55 SDs compared with last year\\'s test.

At this time, which of the following do you recommend?

A. an oral bisphosphonate

B. weekly GnRH injections

C. discontinuation of her vitamin D

D. glucocorticoid therapy

E. IM testosterone

Correct Answer: A Section: (none)

Explanation:

This patient meets criteria for the diagnosis of osteoporosis, with a T score falling below -2.5 standard SD. AT score indicates the number of standard deviations below or above the average peak bone mass in young, healthy adults of the same gender. Bisphosphonate therapy has been shown to reduce vertebral and hip fracture risk in up to 50% of women

with documented osteoporosis. GnRH therapy and discontinuation of her vitamin D therapy would worsen, not improve, this patient\\'s bone density. Although testosterone may arrest further bone loss, the side effects of the medication are too great compared to any potential benefit.

For women who have osteoporosis the serum calcium level is generally normal. In premenopausal osteoporosis, or more severe cases of bone loss/fractures, the presence of metabolic bone disease should be considered. In hyperparathyroidism the serum calcium is elevated. With renal failure, as with osteomalacia, serum calcium is low. The serum calcium level is normal, and the alkaline phosphatase level is elevated in patients with Paget disease. The use of tobacco, a family history of mother or maternal grandmother with hip fractures, postmenopausal state without estrogen replacement, vision problems, and a body mass index of less than 23 are all increased risks for fractures. Abody mass index of greater than 23 does not represent an increased risk for fracture.

QUESTION 8

Numerous types of cancers are associated with infectious diseases. For which of the following cancers is there a vaccine currently available against the infectious agent which leads to the tumor?

A. Burkitt\\'s lymphoma

B. gastric carcinoma

C. hepatocellular carcinoma

D. nasopharyngeal carcinoma

E. Kaposi\\'s sarcoma

Correct Answer: C Section: (none)

Explanation:

Burkitt\\'s lymphoma and nasopharyngeal carcinomas are associated with the Epstein-Barr virus. Gastric carcinoma is associated with H. pylori infection. Kaposi\\'s sarcoma is associated with human herpesvirus 7. The rate of hepatocellular carcinoma is greatly increased in those with chronic hepatitis B and C. Hepatitis B virus infection is the leading cause of hepatocellular carcinoma worldwide, usually after congenital infection in Asia and Africa. Of these infections, only hepatitis B has a widely available, routinely recommended vaccine.

QUESTION 9

A 6-month-old male infant presents to your clinic because the mother is concerned that he is not eating well and he has been constipated. The mother tells you that her prenatal course and delivery were uneventful. On physical examination, the infant has a puffy face, large tongue, and persistent nasal drainage.

Which of the following conditions is most likely to present with these findings?

A. rickets

B. scurvy

C. hypothyroidism

D. microcytic anemia

E. adrenocortical insufficiency

Correct Answer: C Section: (none)

Explanation:

Hypothyroidism results from inadequate thyroid hormone production or a defect in thyroid hormone receptor activity. Hypothyroidism can be congenital or acquired. Most infants with congenital hypothyroidism are asymptomatic at birth. Feeding difficulties, choking spells, and somnolence often present during the first month of life. Respiratory distress can also occur in part due to the large tongue and nasal obstruction. On physical examination, you may find a large abdomen, umbilical hernias, subnormal temperature, cold skin, murmurs, or bradycardia. Iodine is absorbed in the GI tract as iodide. Iodide is concentrated in the thyroid gland and four atoms are incorporated into each molecule of thyroxine. Profound dietary deficiency of iodine will result in hypothyroidism and is the most common cause of goiter in the world. Rickets results from a deficiency of vitamin D.

This condition predominately affects the long bones and skull. Vitamin C deficiency results in scurvy, a condition with impaired collagen formation. The clinical manifestations may include changes in the gums, loosening of teeth, brittle bones, and swollen joints. Pallor is the most important sign of iron-deficiency anemia. Children may also have the desire to ingest unusual substances such as ice or dirt. Finally, hyponatremia and hypoglycemia are the prominent presenting signs of adrenal insufficiency in infants

QUESTION 10

A 25-year-old nulligravid woman presents as a new patient to your gynecology practice. She has recently moved to the area. She is a healthy woman with no medical problems and is currently using oral contraceptives without problems. She informs you that she and her husband are planning to start a family within the next year. On review, you find her family history is unremarkable, but she informs you that her husband\\'s sister has cystic fibrosis.

If she and her husband were both known to carry a cystic fibrosis gene mutation, what would be their likelihood of having a child with cystic fibrosis?

A. 100%

B. 75%

C. 50%

D. 33%

E. 25%

Correct Answer: E Section: (none)

Explanation:

Cystic fibrosis is the most common hereditary condition in Whites with a carrier frequency of 1 in 25. The American College of Obstetricians and Gynecologists, the American College of Medical Genetics, and the National Institutes of Health have recommended that cystic fibrosis carrier screening be offered to all White couples either pregnant or considering a pregnancy, and that the availability of screening be discussed with members of other ethnic groups who

have a lower frequency of cystic fibrosis carrier state. Cystic fibrosis is inherited in an autosomal recessive fashion, so for a couple in which both mother and father are carriers the risk of having an affected child is 25% or 1 in 4. In the case presented, in which the husband\\'s sister has cystic fibrosis, his likelihood of being a carrier is 2 in 3 (since he has an affected sibling, both of his parents are obligate carriers, and since he is not affected, he is either a noncarrier [1 in 3] or a carrier [2 in 3]). This pattern is true for all autosomal recessive disorders.

QUESTION 11

Mr. Jones is a 34-year-old married businessman. He and his wife are both patients in your practice. As part of his annual physical, you screen for high-risk behaviors and he admits to receiving confidential treatment at a public health clinic for gonorrhea and genital herpes. He has not revealed this information to his wife even though they are planning to have a baby. He did not return for the results of HIV screening at the public health clinic. On physical examination, you note that he has cervical and axillary lymphadenopathy, oral thrush, and seborrheic dermatitis. Mr. Jones returns to your office for a follow-up visit. He adamantly refuses to discuss his HIV status with his wife and threatens to sue if you reveal the test results. What is your role as a physician?

A. Respect Mr. Jones\\' patient autonomy.

B. Protect Mr. Jones\\' confidentiality.

C. Contact Mrs. Jones and ask her to come in for an annual examination.

D. Advise Mr. Jones you have a responsibility to notify his wife.

E. Refer Mr. Jones to an HIV specialist.

Correct Answer: D Section: (none)

Explanation:

Although Mycelex troches would be appropriate in the management of his oral candidiasis and the Lotrisone would treat his seborrheic dermatitis, the patient has previously described risk factors for HIV infection and physical symptoms of immunodeficiency. Accurate knowledge of his HIV status is essential in the appropriate long-term management of this patient. In fact, his current physical examination suggests long-standing HIV infection. A lymph node biopsy is not warranted. His wife will eventually need screening for STDs since active STDs increase her risk of cotransmission of HIV. The patient\\'s refusal to discuss his situation with his wife raises many controversial issues with no simple solution. There are multiple arguments which support the ethical guidelines for supporting patient confidentiality. These include: · An appeal to consequences (potential patient discrimination secondary to health information; importance of trust) · Appeal to virtue (physician fidelity) · Respect (awareness and compassion for patient vulnerability) · Do no harm (breach of medical information may lead to discrimination) Respect for patient autonomy incorporates the patient in the treatment process and is based on mutual trust. Referring Mr. Jones to another physician doesn\\'t address the concerns involved in the care of Mrs. Jones. The Tarasoff case (1976) established the following precedent: Patient confidentiality must be upheld as part of the protected clinicianpatient relationship but the physician has a duty to warn specific, innocent third parties of potential harm threatened or posed by the patient. In fact, failure to warn by the physician may constitute negligence. This is not the law in all states. Some states interpret the standard as a strict duty to warn; other states permit physicians to warn affected third parties but not require it. If the physician unilaterally discloses the HIV status, it would represent a breach of confidentiality. However, their marital status may allow this disclosure. Even if the patient is adamant in his refusal, the physician needs to determine the reasons for his reticence. As his physician, you can provide additional information about HIV prevention and treatment. It would be highly unusual for Mr. Jones to ultimately refuse notification of his spouse once he has been urged to do so by his physician. The mechanism for how these complex issues are addressed has potential ramifications for his future trust of physicians, consent to HAART (highly active antiretroviral therapy) treatment, and medication compliance. If these barriers to disclosure cannot be addressed within the physician-patient relationship, the health department can provide a

mechanism for contact testing. Although you could ask Mrs. Jones to come in for a physical examination, she might refuse to have STD tests performed, especially if she perceives herself to be at minimal risk. Ideally, this assessment should be performed prior to a pregnancy. If she is currently HIV negative, then protective measures against future infection can be introduced.

QUESTION 12

A 10-year-old boy presents to your clinic with right knee pain for 2 weeks. He is physically active at school and plays soccer and basketball. He describes pain in his knees when he runs or jumps. He denies any recent trauma. His physical examination is normal except for mild edema and tenderness over the right tibial tubercle. What is the most likely diagnosis?

A. slipped capital femoral epiphysis

B. Osgood-Schlatter disease

C. patellar tendonitis

D. iliotibial band friction syndrome

E. septic joint

Correct Answer: B Section: (none)

Explanation:

Osgood-Schlatter disease is a repetitive stress injury to the inferior end of the patellar tendon at its insertion into the tibial tubercle. These patients are usually young, athletic males between the ages 10 and 15 years. The diagnosis is made when a young male presents with knee pain that increases with exercise without a history of trauma. Treatment consists of rest, activity restriction, and anti-inflammatory agents. Slipped capital femoral epiphysis occurs most commonly in African American obese adolescent males. It refers to a slipping of the epiphysis off the metaphysis. The "slipping" is caused by weakening of the perichondral ring of the growth plate, which allows the epiphysis and metaphysis to gradually or acutely displace from each other. This results in pain in the groin, thigh, or knee as well as a limp. Treatment is primarily operative internal fixation. Patellar tendonitis is caused by injury to the patellar tendon. Most of these patients have tenderness in the inferior portion of the patella and complain of chronic anterior knee pain. Iliotibial band friction syndrome causes lateral knee pain in runners.

QUESTION 13

A76 year old White female presents to her family practitioner complaining of vaginal pressure, dyspareunia, urinary incontinence, and difficulty emptying her bladder for the past 4 weeks. Seven years ago she had a prolapsed "bladder tacking" procedure. Her postvoid residual urine in the office measures 250 mL. The most notable finding on pelvic examination is seen in Figure .

What is the most likely etiology of her urinary retention?

A. detrusor overactivity

B. bladder outlet obstruction

C. urinary tract infection (UTI)

D. menopause

E. spinal cord tumor

Correct Answer: B Section: (none)

Explanation:

When pelvic organs prolapse occurs beyond the level of the hymen, anatomic obstruction of urine occurs in approximately 30% of patients. Over time, urinary stasis from obstruction can lead to UTIs. Detrusor hypocontractility, not overactivity, can be another long-term sequela of chronic urinary retention, enhanced by a stretch injury to the postsynaptic parasympathetics in the bladder wall. Menopause alone is not a risk factor for retention, and a spinal cord tumor is not likely in this patient without specific neurologic complaints or findings on physical examination. Due to urinary stasis, she is at risk for a UTI. Left untreated, she could develop obstructive uropathy and/or pyelonephritis. Surgery is an option, but not without the prior consideration of nonsurgical options such as a pessary or intermittent clean, selfcatheterization (if the problem were to persist). In the event of chronic retention, radiographic imaging would help to assess for upper tract obstruction (i.e., hydronephrosis). Oxybutynin is not appropriate, as it could compound urinary retention. Urodynamic studies could be helpful in the future to ascertain the exact cause of her retention (obstruction from the prolapse vs. chronic detrusor insufficiency vs. neurogenic bladder), but is not the first action to consider.

QUESTION 14

A 49-year-old male presents with crushing substernal pain and rules out for a myocardial infarction. He is noted to have subcutaneous emphysema of the chest and neck and precordial crackles that correlate to his heartbeat but not his respirations.

Which of the following is the most likely diagnosis?

A. spontaneous pneumothorax

B. esophageal perforation

C. pericarditis

D. pneumopericardium

E. pulmonary embolus

Correct Answer: B Section: (none)

Explanation:

"Hamman\\'s crunch" is precordial crackles heard on auscultation that correlate with heart sounds in the setting of mediastinal emphysema and is suggestive of esophageal perforation. When present along with subcutaneous emphysema of the chest and neck, pneumomediastinum from an esophageal perforation is the most likely diagnosis. The most common cause of esophageal perforation is iatrogenic, but it may be spontaneous (Boerhaave\\'s syndrome) or secondary to a malignancy or stricture. Diagnosis is often made after clinical suspicion by endoscopy or a swallow study with water-soluble contrast. If diagnosed early (within 24 hours), a primary repair is the first approach to treatment. Closure is dependent on the amount of infected or necrotic tissue, tension on the anastomosis, etiology of the perforation, and the ability to adequately drain the contaminated areas. Late perforations may be complicated in their management, requiring several procedures or diversion to provide for adequate healing.

QUESTION 15

A28-year-old woman presents for evaluation of primary infertility. She has had fewer than four periods per year since menarche at age 14, facial hirsutism, acne, and weight gain. On examination, she has a BP 150/100. Her body mass index (BMI) is 40. Acanthosis nigricans is noted along the posterior surface of her neck. How would you counsel this patient?

A. The primary treatment for this problem is with medications.

B. Weight loss is key to her management.

C. Her hypertension would be best treated with a thiazide diuretic.

D. Regardless of her lipid panel result, she should be on a statin.

E. Her infertility is due to lack of estrogen production.

Correct Answer: B Section: (none)

Explanation: The patient has the typical features of PCOS associated with insulin resistance and the metabolic syndrome. The presence of hyperandrogenism and oligomenorrhea, without other known causes (such as congenital adrenal hyperplasia), makes the diagnosis of PCOS. The hirsutism and acne are the result of the hyperandrogenism associated with PCOS. Thyroid disorders and hyperprolactinemia can contribute to menstrual disturbances but would not be expected to cause the signs of androgen excess or A. nigricans. A cosyntropin stimulation test would be used for the diagnosis of adrenal insufficiency. Growth hormone levels may be elevated in acromegaly or in some pituitary tumors. Women with PCOS have a high risk of glucose intolerance, diabetes, dyslipidemia, and hypertension. Individuals with insulin resistance syndromes typically exhibit hypertriglyceridemia with low HDLlevels. The key to

management of PCOS is weight loss. Even modest weight loss (1020 lbs) can result in significant improvement in metabolic and physiologic parameters, such as blood pressure and insulin resistance, and improved fertility