



Take Home Primary Care Challenge

BLUEprint Exam Answers

Section 1

1. Answer: B

Classic description of a basal cell carcinoma in a location of increased sun exposure.

2. Answer: C

ST elevations in lead II, III, and AVF are consistent with inferior wall myocardial infarction. The clinical symptoms are also associated with acute MI.

3. Answer: B

The signs and symptoms in this scenario are most suggestive of epiglottitis. Croup would have a seal-like cough and low grade temp, Peritonsillar abscess would have a "hot-potato voice", Pertussis would have whoop sound on inspiration. Tonsillitis would simply have pharyngitis, and the voice would be normal although possibly painful to speak.

4. Answer: D

In an Rh-negative mother and Rh-positive father, there is a 50% chance the baby will be Rh-positive. Rh alloimmunization occurs when the maternal antibodies of an Rh-negative mother binds to a fetus that is Rh-positive (which he received from the father's genes). Rhogam (Rh immunoglobulin) is given to Rh-negative mothers if the father is Rh-positive or if the father's Rh type is unknown.

5. Answer: D

Argyll Robertson pupils are bilateral small pupils that reduce in size when the patient focuses on a near object, yet fail to constrict when exposed to bright light. This is a highly specific sign of Neurosyphilis.

6. Answer: C

Severe persistent chest pain of sudden onset radiating down the back or possibly into the anterior chest is characteristic of a dissecting aortic aneurysm. Syncope, hemiplegia, or paralysis of the lower extremities may occur. Smoking history increased the risk of aortic aneurysm. Widened mediastinum on chest radiograph is consistent with the diagnosis.

7. Answer: A

Duke's criteria includes having two major symptoms, or one major and three minor symptoms or just five minor symptoms. Major criteria can be the following; 2 positive blood cultures from 2 different sites or same site drawn 12 hours apart, endocardial involvement on echocardiogram, and/or new regurgitant murmur. Minor criteria included predisposing heart condition or IV drug use, fever > 38°C (100.4°F), vascular phenomena (i.e. cutaneous hemorrhages, aneurysm, systemic emboli, pulmonary infarction); immunologic phenomena (i.e. glomerulonephritis, Osler nodes, Roth spots, rheumatoid factor); positive blood culture or echocardiogram findings that do not meet major criteria. In this case, the patient has one major criteria (regurgitant murmur), and three minor criteria (fever, splinter hemorrhages, and Janeway lesions).

8. Answer: B

The presentation of dysmenorrhea, deep-thrust dyspareunia, intermittent spotting, and pelvic pain is consistent with Endometriosis. It most commonly is seen in nulliparous woman in the late 20's or early 30's and is found in 25-35% of infertile woman.

9. Answer: A

Explain: Tan colored waxy stuck-on appearing lesions on sun exposed areas is most consistent with seborrheic keratosis.

10. Answer: B

The EKG described is of a 3 to 1 A-Flutter pattern. When there is a consistent 3:1 conduction, the R-R intervals will be normal. Since the ventricular stimulus originates from the AV node, the QRS complexes will be narrow.

11. Answer: C

Diagnostic criteria for Meniere disease includes at least two spontaneous episodes of rotational vertigo lasting at least 20 minutes, with audiometric confirmation of sensorineural hearing loss, and tinnitus. Acoustic neuroma typically presents with progressive asymmetric hearing loss and rarely has true vertigo. Cerumen impactions will not presents with inner ear manifestations, simple decreased hearing and not be episodic. Migraine will usually be associated with a headache. TIA are typically of shorter duration and rarely experience simultaneous vestibular and cochlear symptoms.

12. Answer: D

Tamiflu is the drug of choice for seasonal influenza if started within 48 hours of onset of symptoms, and is indicated in those with chronic pulmonary, kidney, and cardiac conditions.

13. Answer: E

Prinzmetal angina exists when during an episode of pain, usually lasting less than 15 minutes. A patient has EKG manifestations of ST elevation that resolve shortly after the pain. Transient T-wave inversion may be present after the ST segment returns to baseline, however this too returns to normal.

14. Answer: C

Explain: Acute hypocalcemia can be precipitated when a patient with untreated hypoparathyroidism is started on a PPI. Multiple myeloma is a common cause of hypercalcemia in the older population.

15. Answer: B

This scenario has the classic signs of intussusception. Pyloric stenosis would present with non-bilious vomiting. Rectal prolapse would be visible on rectal exam, Meckel diverticulum is usually asymptomatic or painless rectal bleeding. Intussusception often blocks food or fluid from passing through the intestines. It can lead to bowel perforation, infection and death of bowel tissue

16. Answer: D

Attention Deficit Disorder is a behavior disorder that has no associated enuresis component. Childhood disintegrative disorder is a pervasive developmental disorder associated with autism in which the child shows clinically significant losses of earlier acquired skills in at least two of the following (language, bowel or bladder control, play, motor skills). Key features of myoclonic seizures include single or multiple myoclonic jerks. The petit mal (absence) seizure is characterized by brief impaired consciousness with potential for autonomic components like enuresis that almost always begin in childhood and frequently ceases by age 20.

17. Answer: B

Acute mesenteric ischemia presents with rapid onset of severe periumbilical abdominal pain out of proportion to findings on physical examination. Nausea and vomiting are common. Sudden pain associated with minimal abdominal signs and forceful bowel evacuation in someone with risk factors is suggestive of the disease. Risk factors include advancing age, atherosclerosis, low cardiac output states, arrhythmias, cardiac valve disease, recent myocardial infarction and intra-abdominal malignancy.

18. Answer: D

Renal artery stenosis should be suspected in a patient with acute kidney injury in patients starting ACE inhibitor therapy. Signs and symptoms may include acute kidney injury and abdominal bruit.

19. Answer: E

Nosocomial pneumonia (Hospital acquired) develops more than 48 hours after admission to the hospital in a previously healthy individual.

20. Answer: A

Failure of the left or right ventricle to pump an adequate amount of blood is the primary cause of cardiogenic shock in acute myocardial infarction. Hypotension, hypoperfusion, and pulmonary congestion or systemic venous congestion can occur.

21. Answer: A

Lichen planus is usually a desquamative lesion of the vagina that causes chronic vulvar burning and/or pruritis with insertional dyspareunia and a profuse vaginal discharge. The diagnostic biopsy shows an absence of atypia in the hyperplastic area. Diagnosis is usually made with history of dyspareunia and physical exam showing bright red patchy distribution and WBC's on wet prep.

22. Answer: B

G6PD causes episodic hemolytic anemia in response to certain medications that include antimalarial medications. Most frequently found in black or Mediterranean descent.

23. Answer: B

Gram-negative intracellular diplococci are consistent with Gonorrhea.

24. Answer: D

Toxic megacolon can develop in patients with ulcerative colitis, although usually in < 2% of cases. It is characterized by colonic dilation of more than 6 cm on plain films with signs of toxicity.

25. Answer: B

Cluster headaches are severe unilateral periorbital pain occurring daily for several weeks and often associated with ipsilateral nasal congestion, rhinorrhea, lacrimation, redness of the eye, and Horner syndrome. Anterior uveitis and CN III damage is not episodic. Cocaine abuse would result in constriction of blood vessels and dilated pupils. Pontine hemorrhage would cause bilateral pupil constriction and not be episodic.

26. Answer: A

These findings are most consistent with adhesive capsulitis. Adhesive capsulitis is a painful and at times disabling disorder of unclear cause in which the shoulder capsule, the connective tissue surrounding the glenohumeral joint of the shoulder, becomes inflamed and stiff, greatly restricting motion and causing chronic pain. Pain is usually constant, worse at night, and with cold weather.

27. Answer: C

Dysthymia is a chronic depressive disturbance with sadness, loss of interest, and withdrawal from activities for two years or more with a relatively persistent course.

28. Answer: A

Asthma by definition is a reversible hyperactive airway disease. Diagnosis is established as airflow obstruction by a reduced FEV₁/FVC ratio that shows reversibility with a increase of $\geq 12\%$ and 200ml in FEV₁ or $\geq 15\%$ and 200ml in FVC.

29. Answer: B

1 in 400 American black children will be born with sickle cell anemia. The disorder starts within the first year of life when hemoglobin F levels fall. The ensuing hemolytic anemia produces jaundice and splenomegaly early in life.

30. Answer: E

Along with anticoagulation, rate management is appropriate for the treatment of atrial fibrillation. Beta-blockers or calcium channel blockers are the most appropriate. For patients with heart failure, beta-blocker in addition to digoxin is an appropriate regimen.

31. Answer: D

These findings are consistent with lumbar stenosis. There is no bowel or bladder dysfunction, acute change in symptoms or worsening symptoms to suggest cauda equina syndrome. There was no acute injury to suggest a lumbar strain.

32. Answer: D

The hallmark of a panic disorder is characterized by short-lived, recurrent, unpredicted episodes of intense anxiety accompanied by marked physiologic manifestations (in this case the dyspnea, palpitations and facial paresthesia). Given normal vital signs and normal exam, a panic attack is the most likely etiology.

33. Answer: D

Supplemental oxygen is the only drug therapy for which there is evidence showing improvement in the natural history of COPD in those patients with resting hypoxemia. Proven benefits of home oxygen therapy in hypoxemic patients include longer survival, reduced hospitalization needs, and better quality of life. Survival is directly proportionate to the number of hours per day O₂ is administered.

34. Answer: E

The description of the rash is consistent with chickenpox and is prevented by the varicella vaccine.

35. Answer: C

Respiratory Distress Syndrome (AKA hyaline membrane disease) is a common problem in preterm infants and is caused primarily by deficiency of pulmonary surfactant in an immature lung. Diagnosis is based on clinical picture of a premature infant with onset of progressive respiratory failure shortly after birth in conjunction to the classic diffuse reticulogranular ground-glass appearance with air bronchograms.

36. Answer: E

Scabies are frequently caused by sexual contact, and have an incubation period of three weeks before causing a predominantly nocturnal itch. The burrow is highly suggestive of the diagnosis.

37. Answer: B

Bronchiolitis due to respiratory syncytial virus frequently presents with apnea as the initial symptom. It classically presents as a progressive respiratory illness that is similar to the common cold in its early phase and progress over 3 to 7 days to noisy, raspy breathing and audible wheezing.

38. Answer: E

The CDC recommends several annual screening tests for men who have sex with men. These include urethral/urine DNA testing for gonorrhea and chlamydia in men who have had insertive intercourse during the preceding year; testing for rectal gonorrhea and chlamydia in men who have had receptive anal intercourse during the preceding year; and DNA swab or culture for pharyngeal gonorrhea in men who have had receptive oral intercourse during the preceding year. Testing for pharyngeal chlamydial infection is not recommended.

39. Answer: C

Explain: COPD is defined by the American Thoracic Society as a disease state characterized by the presence of airflow obstruction due to chronic bronchitis or emphysema. Chronic bronchitis is a clinical diagnosis defined by excessive secretion of bronchial mucus and is manifested by daily productive cough for 3 months or more in at least 2 consecutive years.

40. Answer: B

The murmur of mitral regurgitation occurs as blood is expelled from the left ventricle to the left atria rather than through the aorta during systole. As it is a continuous flow of blood during contraction of the ventricle, it is a holosystolic murmur. The resistance created by the valve causes the sound to radiate to the apex (bottom) of the heart, but is also heard in the trajectory of the blood flow back into the left atrium radiating into the axilla and scapula given the 3D flow.

41. Answer: D

Classic pertussis includes the paroxysmal cough during expiration and forceful inhalation against a narrowed glottis, which produces the characteristic whoop.

42. Answer: E

Erythropoietin (EPO) is produced by interstitial fibroblasts in the kidney. The doubled BUN and creatinine are indicative of renal failure, which would result in chronic kidney disease.

43. Answer: B

Antidiuretic hormone deficiency causes central diabetes insipidus with polyuria and polydipsia. Symptoms include intense thirst and polyuria. Fluid intake varies. Diabetes insipidus is aggravated by administration of high-dose corticosteroids, which increases renal free water clearance.

44. Answer: A

Non-small cell carcinoma accounts for 85% of the lung cancers diagnosed and include adenocarcinoma, large cell carcinoma and squamous cell carcinoma. Small cell carcinoma or oat cell accounts for the other 10 – 15%.

45. Answer: D

A painless otherwise asymptomatic abdominal swelling found incidentally by parents should be suspected for a Wilms' tumor. Biliary atresia, pyloric stenosis, intussusception, and Meckel diverticulum would all have associated symptoms.

46. Answer: C

The signs and symptoms presented in this condition are consistent with Guillain-Barre Syndrome. Treatment includes plasmapheresis and high dose immunoglobulin, especially in cases of rapid progression. Intubation is considered if the forced vital capacity reaches 15 mL/Kg, dyspnea becomes evident, or oxygen saturation declines. Dialysis has no role in the treatment of Guillain-Barre syndrome. Prednisone is ineffective and may prolong recovery time. This condition can progress to cause respiratory compromise requiring intubation and ventilator support. Reassurance could potentially be fatal if patient is not observed.

47. Answer: A

The timing in this question is significant as the essentials of diagnosis for bulimia nervosa. They are uncontrolled episodes of binge eating at least twice weekly for 3 months. The current symptoms are associated with hypokalemia which is frequently a manifestation of inappropriate compensatory behavior to prevent weight gain such as self-induced vomiting, diuretic or cathartic use, or strict dieting or vigorous exercise.

48. Answer: E

Right heart catheterization is the gold standard for the diagnosis of cor pulmonale, and it demonstrates evidence of right ventricular dysfunction (i.e. elevated central venous pressure and right ventricular end-diastolic pressure). Also consistent with the disease is pulmonary hypertension as evidenced by pulmonary pressure > 25mmHg at rest, and no left heart disease.

49. Answer: C

Colonic adenomatous polyps usually develop by a mean age of 15 and become cancerous by age 40. Unless prophylactic colectomy is performed, colorectal cancer is inevitable by age 50.

50. Answer: E

Unstable narrow or wide angle tachycardia should be treated with synchronized cardioversion. Defibrillation (unsynchronized) is used for ventricular fibrillation or pulseless v-tach. Adenosine is only indicated in stable ventricular tachycardia

51. Answer: C

An approach to rapid evaluation of an acutely inflamed joint is to screen the synovial fluid for crystals via polarizing microscopy and for organisms via Gram stain. If crystals are present and the Gram stain findings are negative, treatment for crystal-associated arthritis should be initiated.

52. Answer: C

Mitral stenosis is usually due to underlying rheumatic heart disease which results in thickening of the leaflets, fusion of the mitral commissures, retractions, thickening and fusion of the chordae, and calcium deposition in the valve. A characteristic finding is the opening snap after the A₂ heart sound due to the stiff mitral valve. Symptoms are often precipitated by pregnancy. Echocardiography is the most valuable technique for assessment of mitral stenosis.

53. Answer: D

Chest imaging pattern traditionally associated with primary disease includes small unilateral infiltrates, hilar and paratracheal lymph node enlargement, and segmental atelectasis. Reactivation is associated with fibrocavitary apical disease. Triangular sail appearing consolidation to the right of the mediastinum is representative of the thymus.

54. Answer: B

The treatment of choice for acute compartment syndrome is early decompression. If the tissue pressure remains elevated in a patient with any other signs or symptoms of a compartment syndrome, adequate decompressive fasciotomy must be performed as an emergency procedure. Following fasciotomy, fracture reduction or stabilization and vascular repair can be performed, if needed.

55. Answer: C

Octreotide reduces portal pressure by reducing portal and splanchnic blood flow, thereby reducing the bleeding from the esophageal varices.

56. Answer: A

Osteoarthritis of the hand most often affects the distal interphalangeal (DIP) joints but also typically involves the proximal interphalangeal (PIP) joints and the joints at the base of the thumb. Heberden nodes, which represent palpable osteophytes in the DIP joints, are more characteristic in women than in men. Inflammatory changes are typically absent or at least not pronounced.

57. Answer: C

Elevation of BUN and creatinine are representative of acute kidney injury. In this patient who had normal lab results one month ago, with a history of working outside in the hot sun, dehydration is the most likely cause of the AKI. Pre-renal etiology is the most common reason for AKI accounting for 40-80% of cases. Fluid rehydration can prevent renal parenchymal disease.

58. Answer: C

Iron deficiency anemia is the most common cause of anemia. To maintain adequate iron stores secondary to heavy menstrual losses, the body must absorb 3-4 mg of iron from the diet each day, which may be excessive. Treatment with oral iron can allow up to 10mg of absorption daily.

59. Answer: C

The signs and symptoms are suggestive of polycystic ovary syndrome. Long-term oral contraceptive to suppress ovulation use may be protective to prevent ovarian cancer.

60. Answer: D

Cerumen Impaction is a cause of conductive hearing loss. In conductive hearing loss, a Weber test would have the sound lateralizes to the same ear affected with the hearing loss. A Rinne Test would have bone conduction greater than air conduction.

61. Answer: D

A combination of a diuretic and an ACE inhibitor should be the initial treatment in most symptomatic patients.

62. Answer: B

Koplik spots are pathognomonic for measles. They are gray-white, sand grain-sized dots on the lower mucosa opposite the lower molars. Warthin-Finkeldey cells are histologic findings of measles. Stimson line is also associated with measles but located in the conjunctiva as described in the vignette. Roth spots are ocular findings, and forschheimer spots are associated with Rubella and are rose-colored spots on the soft palate.

63. Answer: D

Sialogogues promote ductal secretions and should be used throughout the day as often as tolerated by the patient.

64. Answer: D

Unlike epidural hematomas, subdural hematomas are not restricted by dural tethering at the cranial sutures; they can cross suture lines and continue along the falx and tentorium. However, they do not cross the midline because of the meningeal reflections.

65. Answer: D

Patients with hoarseness persisting for more than two weeks, in the absence of symptoms of an acute respiratory infection should have complete evaluation to include visualization. CT scanning or other radiographic evaluation is not a substitute for direct laryngeal examination although may be a valuable adjunct.

66. Answer : D

ZES is a neuroendocrine tumor (gastrinoma) that leads to gastrin hypersecretion and multiple peptic ulcer formation (often refractory to treatment). The tumor can secrete histamine and other neuroendocrine hormones, leading to a secretory diarrhea that does not change with fasting. Secretin is an enzyme that is secreted by the duodenum that causes activation of pancreatic enzymes and inhibition of gastrin normally. Gastrin secretion in gastrinoma is not inhibited by secretin. Gastrin levels are used as the screening test for ZES.

67. Answer: A

Up to 70 percent of patients with coarctation of the aorta also have a bicuspid aortic valve.

68. Answer: B

Tourette's syndrome is characterized by motor tics predominately affecting the head, neck and face as well as repeating phrases (echolalia) or shouting out obscenities (coprolalia).

69. Answer: E

This is the classic description of obsessive-compulsive personality disorder. Psychotherapy is often considered the first line therapy. Beta blockers may be used as adjunctive therapy if there is an anxiety component and SSRI's may be used as adjunctive therapy if there is a depression component.

70. Answer: D

Skier's thumb is an injury to the ulnar collateral ligament (Gamekeeper's thumb is the chronic version). It is most often due to the forced thumb abduction, leading to increased laxity on valgus stress of the thumb. Sometimes, the ulnar collateral ligament can pull off a piece of the bone at its insertion site when it ruptures, causing a small avulsion fracture at the base of the proximal phalanx.

71. Answer: D

Anterior cerebral artery syndrome result in contralateral hemiparesis (weakness) that tends to be greater in the leg than the arm, is associated with urinary incontinence, abulia (lack of will) and personality changes.

72. Answer: B

Schizoid personality disorder is characterized by a long pattern of voluntary social withdrawal and often appears lonely with a very "cold", flattened affect. They tend to exhibit hermit-like behavior and the inability to form long-term relationships because they don't see any point in sharing their time with others. Patients with schizoid personality classically tend to lack the odd eccentric behavior such as the "magical thinking" seen in schizotypal disorder or in schizophrenia.

73. Answer C

Cryptococcal meningitis is the most common cause of fungal meningitis. The CSF findings of decreased glucose and elevated white blood cell count with lymphocytosis are characteristic of fungal or tuberculosis meningitis. India ink and the Cryptococcal antigen examination of the cerebrospinal fluid are diagnostic tests used in suspected cases of Cryptococcal meningitis.

74. Answer: E

Retinal detachment is classically associated with photopsia (flashing lights) when the retina detaches followed by progressive vision loss that is often described as "curtain-like" beginning in the periphery and then progressing centrally. Schaffer's sign is the visualization of clumps of the retinal pigment cells in the anterior vitreous humor on slit lamp examination.

75. Answer: D

This vignette describes the classic signs of pheochromocytoma, which is a neuroendocrine tumor that secretes catecholamines, causing palpitations, headache, excessive sweating and hypertension. Elevated 24-hour measurements of the metabolites of epinephrine (such as vanillylmandelic acid) are characteristic of pheochromocytoma.

76. Answer: D

The patient has pulmonary symptoms, a positive AFB smear, and an upper lobe consolidation all consistent with active tuberculosis infection. The management of choice is initiation of 4 drugs "RIPE" or "RIPS". The total treatment duration for active tuberculosis is 6 months (the drugs are discontinued basis of the sensitivities determined by cultures).

77. Answer: C

Tennis elbow is inflammation of the tendon insertion of the extensor carpi radialis brevis muscle and is associated with lateral tenderness at the insertion site.

78. Answer: B

The Graham Steell murmur is a high-pitched early diastolic murmur best heard at the left upper sternal border accentuated with deep inspiration. The murmur is due to pulmonary hypertension and increased velocity. Deep inspiration increases the murmur on the right side of the heart (due to the increased flow to the right side during inspiration to allow oxygenation of the inspired air).

79. Answer: D

Primary hyperaldosteronism is an autonomous increase in aldosterone (not renin dependent). Aldosterone functions to absorb sodium in exchange for potassium and hydrogen ions so hyperaldosteronism is associated with sodium retention (leading to hypertension), hypokalemia (prominent U waves on ECG, polyuria and weakness associated with hypokalemia) and metabolic alkalosis. An increased aldosterone: renin ratio distinguishes primary hyperaldosteronism from secondary hyperaldosteronism.

80. Answer: B

Hot flashes and vaginal dryness are seen in postmenopausal as a direct consequence of decreased estrogen, so estrogen therapy is the most effective management for these symptoms. However, keep in mind that in postmenopausal women with an intact uterus, estrogen therapy alone (unopposed estrogen) may lead to endometrial hyperplasia and possibly endometrial cancer. These risks must be explained to the patient if they have an intact uterus. Other medications used to treat hot flashes, vasomotor insufficiency and similar symptoms include progesterone, clonidine, SSRI's and gabapentin.

81. Answer: E

Metformin is a biguanide that is associated with acute kidney injury, gastrointestinal side effects, lactic acidosis and megaloblastic anemia. In this scenario, there is an elevated mean corpuscular volume with normal B12, folate and liver function (all can also produce a macrocytic anemia), making metformin the likely answer.

82. Answer: C

This is an example of a 2-step question. The first step is to determine the acid base disorder and the second is to determine which choice correlates with the answer in step 1. To determine the acid base, first look at the pH to determine if it is acidosis or alkalosis. The pH here is 7.56 (normal pH is 7.35-7.45) so the patient is alkalotic. The next step is to look at the PCO₂ to see if it correlates. The patient's PCO₂ is 23 (normal PCO₂ is 35-45 mmHg) so a number less than 35 is consistent with respiratory alkalosis, meaning the primary disorder is respiratory alkalosis (the bicarb is 21 and if the primary disorder was metabolic, then the bicarb would have been increased). The bicarb is low in an attempt to try to compensate. Now that you determine the acid base disorder, choice C (hyperventilation) will cause patient to blow off CO₂.

83. Answer: E

DeQuervain's thyroiditis is thyroid inflammation most commonly seen after a viral illness. The hallmark of DeQuervain's thyroiditis is the presence of thyroid tenderness and pain as well as an elevated erythrocyte sedimentation rate.

84. Answer: C

This vignette describes atypical squamous cells of undetermined significance (ASCUS) with positive HPV infection (HPV becomes whitened when acetic acid is applied to the lesions). HPV positive lesions have a higher risk of progression to cervical carcinoma so in women greater than 25 years of age with HPV-positive ASCUS, the recommendations are to either perform colposcopy with biopsy or to repeat the PAP in 1 year and to perform colposcopy if it is still positive at the time. All of the other choices are not the management of HPV positive ASCUS.

85. Answer A

International travel is the most common predisposing factor. Hepatitis A is transmitted feco-oral and is the only viral hepatitis associated with high spiking fevers.

86. Answer: C

In ocular chemical exposures, irrigation to remove the chemical from the eye is the first and most important step before any other assessment. After irrigation, the pH is checked to assure that the chemical has been completely removed from the eye to prevent further damage and then visual acuity can be assessed.

87. Answer: C

Dubin-Johnson syndrome is caused by a hereditary genetic mutation, which prevents hepatocytes from secreting conjugated bilirubin, leading to an isolated direct (conjugated) bilirubinemia. Think D (direct) = Dubins. Rotor syndrome is a milder form of the disease.

88. Answer: C

Pronator syndrome is median nerve compression at the level of the proximal forearm. Patients develop symptoms similar to carpal tunnel syndrome but the symptoms usually predominate in the hand and the forearm (compared to the wrist as seen with carpal tunnel syndrome). Pronator syndrome is not associated with pain at night as seen in carpal tunnel syndrome.

89. Answer: A

A is the management of choice for small, uncomplicated ovarian cysts. Symptomatic treatment for the pain and repeat ultrasound between 6-12 weeks to assess if the cyst is not growing is the mainstay of treatment for these patients.

90. Answer: C

A fourth heart sound is the most consistent physical exam finding in patients with myocardial infarction.

91. Answer: B

The triad of amenorrhea, obesity and hirsutism is classic for polycystic ovarian syndrome. Polycystic ovarian syndrome is due to dysfunction of the hypothalamus-pituitary-ovarian axis and an increase in androgen production in women (due to increased insulin from insulin resistance and luteinizing hormone).

92. Answer: A

These findings are classic for bacterial vaginosis. Bacterial vaginosis is caused by an overgrowth of normal flora (especially Gardnerella vaginalis). It produces a thin, homogenous watery grey-white "fishy, rotten" smell worse with potassium hydroxide application with clue cells.

93. Answer: C

The classic mechanism of injury is falling on an outstretched hand with the wrist extended. On lateral radiographs, DORSAL angulation of the distal segment is classically seen in Collic's fracture.

94. Answer: B

Amebiasis is classically associated with diarrhea and the development of hepatic abscesses. Stool ova and parasite testing will be positive in Entamoeba infections.

95. Answer: C

Orbital cellulitis is an infection of the cavity surrounding the eye. It is also associated with local superficial signs of infection. Due to the involvement of the ocular muscles, it is associated with visual changes and pain with ocular movement.

96. Answer B

Diarrhea, joint pain, fevers are commonly seen in patients with Whipple's disease. CNS involvement may cause twitching of the eye muscles while chewing. Positive PAS macrophages and dilation of the lacteals on biopsy are hallmark of the disease.

97. Answer: B

Hip fractures are classically associated with inability to bear weight. The fractured side is foreshortened and externally rotated. The fracture seen in the image involves the space between the trochanters and part of the neck.

98. Answer: E

Huntington's disease is an autosomal dominant neurodegenerative disorder classically associated with the triad initial behavioral changes, then chorea, and eventually dementia. The classic findings on CT scan is cerebral and caudate nucleus atrophy. The caudate nucleus is part of the basal ganglia and as such can cause movement disorders such as chorea.

99. Answer: C

Herpetic gingivostomatitis is the primary manifestation of herpes simplex virus (Type I) in children. It manifests as sudden onset of fever, anorexia, gingivitis (gum swelling, friable/bleeding gums) and yellow grey vesicles on the oral mucosa, tongue and lips.

100. Answer: D

The string sign, non-bloody diarrhea and right lower quadrant pain is highly suggestive of Crohn's disease. The terminal ileum is the most common site of Crohn's disease and since it is located in the right lower quadrant, RLQ pain is a common finding in patients with Crohn's. Both inflammatory bowel diseases (Crohn's and Ulcerative Colitis) are thought to arise from an inappropriate autoimmune response to the normal GI flora. Antibodies against the harmless saccharomyces cerevisiae (Baker's/Brewer's yeast) is seen in about 70% of patients with Crohn's. Because Crohn's most commonly affects the terminal ileum (where B12 is absorbed), patients may develop a B12 deficiency and a subsequent macrocytic anemia with an increased mean corpuscular volume (MCV) of the red blood cell.