Clinical Scenarios Answer Key

CHAPTER 4: HEAD, EARS, EYES, NOSE, THROAT, & NECK EXAM

Scenario 1: Raymond

Questions:

1. What are your suspicions? Create a differential diagnosis of what conditions might result in his symptoms and physical exam findings.
2. Should you decide on a course of several acupuncture treatments to see how he does, or follow another plan of action? If so, what?

Answers:

1. This might be cancer of the throat. His history of heavy smoking plus the alcohol drinking synergize to place him in a high risk for this problem. His history and PE findings strongly suggest such a possibility. He could also have cancer of the tongue or the esophagus. He could simply have a chronic sore throat. He could have mononucleosis (mono; Epstein Barr).
2. No more acupuncture treatments for now, unless they continue as he is being worked up for cancer and other conditions as listed above. Call an oncologist or call his medical doctor and ask him to call the oncologist. Make sure he gets worked up for this promptly.

Scenario 2: Ellen's little boy

Questions:

1. Do you start off with a trial of acupuncture?
2. If not, what is your plan of action?
3. Create a biomedical differential diagnosis to guide your plan of action

Answers:

1. No. This is potentially a serious problem, which needs to be addressed before any acupuncture treatments
2. He needs an immediate medical referral.
3. This is likely to be a sarcoma of the eye; tragically not uncommon in children. It could also be an infection of the entire eyeball, or a foreign body in the eye, such as a seed or cinder which has caused significant inflammation. Call an eye specialist; an ophthalmologist, listed in the yellow pages online for your area.

Scenario 3: Rosemary

Questions:

1. What do you think may be causing her headaches? List your differential diagnosis with your leading diagnosis on top.
2. Should you go ahead and start her on a course of acupuncture treatments and nothing else?
3. If you decide to do something else, what would it be?
4. How serious might this be in terms of possible outcomes without appropriate treatment?

Answers:

1. Acute sinusitis is by far the most likely possibility. She could also have a dental abscess. This could also be stress headaches, or some variation of migraine headaches. She is mildly hypertensive but not severe enough to cause headaches. This is an acute problem.
2. No, she needs to be seen by a medical doctor for a precise diagnosis, culture of her sinuses and aggressive antibiotic treatment if the diagnosis is sinusitis.
3. She needs referral to a medical doctor for antibiotic treatment as noted above.
4. Her life could be in danger, as she is a diabetic, and if this infection is not treated appropriately she could develop a brain abscess. Many individuals die of sinus or ear infections these days, in spite of modern antibiotics and medical treatments, and this likelihood increases dramatically in diabetics as well as those infected with HIV.

Scenario 4: Wally

Questions:

1. Granted that this patient came to see you because of back pain, but what should you do?
2. Should you treat his back pain?
3. List a biomedical differential diagnosis of the conditions that might be present.
4. How aggressive should you be in dealing with this man's medical problems in the most appropriate way for him?

Answers:

1. Discuss with him that you are concerned about his enlarged lymph nodes, especially since he has unintentionally lost weight.
2. Emphasize your main concern is not his chronic back pain but your positive physical findings.
3. He could have a cancer of the head or neck. The palpation of a mass or enlarged lymph nodes is the most common manifestation of such a cancer. He could also have a lymphoma or even leukemia with enlarged lymph nodes and weight loss.
4. Be aggressive. Tell him he needs to see an oncologist. With Wally's permission, you could call his regular physician and report your findings and your thoughts about this man to him or her, or directly schedule an appointment for Wally with an oncologist.

CHAPTER FIVE: EXAMINATION OF THE CHEST AND LUNGS

Scenario 1: Angela

Questions:

1. Might she die? What is your presumptive diagnosis?

2. What do you do next?
3. What treatment will she likely need to undergo?
4. What would you recommend after she gets over the acute problem she's experiencing?

Answers:

1. Yes, she might. She is likely experiencing a pulmonary embolism.
2. Tell her you are calling 911. Tell the dispatcher your patient is experiencing a life-threatening pulmonary embolism and needs emergent transport to a hospital emergency room
3. IV heparin, bed rest
4. She'll need oral Coumadin for one year after discharge, with support hose; you need to emphasize to her she must lose weight. You can give her treatments to help her with weight control

Scenario 2: Emilio

Questions:

1. What is your diagnosis? What pathological conditions go together to contribute to what is going on clinically?
2. Why is he not cyanotic?
3. What would you expect his pulmonary function studies to show?
4. How about his arterial blood gasses?
5. What treatment parameters would you suggest? (be aggressive in your suggestions).

Answers:

1. COPD. Chronic bronchitis and emphysema go together to lead to this condition.
2. He is not shunting blood from the venous circulation into the arterial circulation. He has the type of COPD known as a "pink puffer". He can still oxygenate his blood although he works hard to do so.

3. They would show increased lung volume, with decreased maximum mid-expiratory flow rates.
4. They would be normal, or almost normal with a mild decrease in oxygen saturation and partial pressure of oxygen in the blood.
5. First of all, get him to discontinue smoking. This might require intensive treatment at a detox center that specializes in stop smoking treatments, and could be facilitated by nicotine patches or nicorette gum. Bronchodilators are often helpful in treating COPD although no treatments other than cessation of smoking slow the steady progression of this fatal disease. Oxygen is sometimes needed, especially in the other kind of COPD, the "blue bloaters" who shunt blood away from areas that are not well ventilated due to bronchial obstruction. Corticosteroids are sometimes used to help patients get over acute exacerbations of this disease but are not very helpful otherwise. Antibiotics are given if there are signs of an acute infection with fever, purulent mucus, and increased white blood count. Physical therapy with vibrating vest treatments or cupping are often helpful.

Scenario 3: Amy

Questions:

1. What is going on here? What is your diagnosis, or diagnoses?
2. In your view, how serious is her medical condition?
3. What can you suggest in the way of medical treatment?
4. Suggest all the ways you can help to change her lifestyle.

Answers:

1. She likely has COPD, and has the "blue bloater" type of this condition with shunting of blood in the lungs because of collapsed bronchioles and non-perfused parts of the lung fields. She also has aortic stenosis and heart failure.
2. This is very serious and will cause her to become more critical unless treated aggressively.

3. Absolute discontinuance of smoking (her life depends on it); treatment of her heart failure (digitalis, diuretics, oxygen as needed); expectorants, bronchodilators, physical therapy of the chest with vibration treatment, cupping, to bring up her secretions and clear the lung passages
4. No smoking, diet to reduce weight, supervised exercise, stress reduction training, meditation or other mind-body-spirit practices

Scenario 4: Freda

Questions:

1. What is your major presumptive diagnosis, in terms of her chief complaint?
2. What other possible diagnoses do you have in this woman where there seems to be much going on that has not been looked into?
3. What could you do that would enable this major diagnosis to be proven correct?
4. If it is correct, would treatment could be carried out to solve her problem.
5. What other advice would you give this nice woman?

Answers:

1. Sleep apnea
2. Hypertension, undiagnosed cardiac arrhythmia, metabolic syndrome
3. Have her seen by experts in a sleep clinic
4. She might need surgery to correct her upper respiratory obstruction
5. Find some companionship (join a club, a church, a group of other Latvian immigrants, join a community center and engage in activities there with others) Start a better diet and find someone who cares; someone who will then support her efforts to do this.

CHAPTER SIX: EXAMINATION OF THE HEART

Scenario 1: Larry

Questions:

1. What is your presumptive diagnosis?
2. Is this a red flag case?
3. What tests would you recommend be done to further establish the diagnosis?
4. What treatment might Larry be in need of?

Answers:

1. You must assume he is having a heart attack; an acute myocardial infarction
2. Yes, by all means
3. Admission to hospital; ECG tracing, cardiac enzymes
4. Oxygen, antiarryhythmic agents as needed, aspirin, support of blood pressure if necessary, beta blockers or calcium channel blockers may be needed, close monitoring in the CCU, possible coronary bypass or balloon angioplasty surgery if the patient's condition declines.

Scenario 2: Belinda

Questions:

1. What is your presumptive diagnosis, or diagnoses?
2. What studies does she need for a medical work-up?
3. What medications might she require?
4. What is her prognosis?

Answers:

1. Hypertension, with heart failure probably secondary to this.
2. Complete workup for hypertension and for heart failure; ECG, cardiac enzymes, electrolytes, 24 hour urine for catecholamines (pheochromocy-

toma workup), ultrasound of her kidneys, creatinine, BUN, 24 urine for cortisol (Cushing's syndrome workup)

3. Digitalis, possible beta blocker, durietics, other treatment for her hypertension as determined by a cardiologist
4. With appropriate treatment for her hypertension and her heart failure she has a relatively good prognosis. There is nothing that is immediately life threatening going on, if she gets good treatment.

Scenario 3: Kristen

Questions:

1. What is your presumptive diagnosis?
2. What might be the possible causes of such a condition?
3. How can you establish the correct diagnosis more definitively?
4. Is this an acute red flag? A subacute red flag?
5. What should you do?

Answers:

1. Myocarditis
2. Viral, or autoimmune (seen with lupus, rheumatoid arthritis)
3. Referral to a cardiologist for an echocardiogram, blood studies for autoimmune disorder
4. This is a subacute red flag
5. Again, call a cardiologist and arrange an appointment for Kristen

Scenario 4: Ali Hussein

Questions:

1. What is your presumptive diagnosis?
2. Is this an acute red flag? A subacute red flag?
3. What tests could help establish the diagnosis you are proposing?
4. What will this gentleman require if your diagnosis is correct?

Answers:

1. Aortic aneurysm
2. This is a subacute red flag; a compelling one. He needs to be seen by a vascular surgeon within the next few days for a full evaluation
3. Ultrasound of his aorta, and possible arteriography with contrast to check his entire lower circulation from his aorta to his feet (to be decided by the vascular surgeon)
4. He'll need surgical repair of his aneurysm and replacement with a gortex graft or an internal stent to bypass the aneurysm.

CHAPTER SEVEN: EXAMINATION OF THE ABDOMEN

Scenario 1: Mack

Questions:

1. What is your presumptive diagnosis?
2. Is Mack's obvious acute infection the only problem he may be facing, here?
3. If lab studies confirm your presumptive diagnosis, what treatment might be helpful?
4. What "list" might he be on a few years from now, if he can clean up his act and stop his drugs?

Answers:

1. Acute viral hepatitis, B or C
2. No, it is likely to be hepatitis C which usually goes chronic, and can later lead to cirrhosis with liver failure or cancer of the liver.
3. Interferon injections three times a week for a year
4. The liver transplant list

Scenario 2: Roberta

Questions:

1. What is your presumptive diagnosis, even prior to your physical exam?
2. Your practice allows you to perform a rectal exam. What do you expect you might (or might not) note during this exam?
3. What further diagnostic tests should be done?
4. Might this woman need surgery? If so, what operation or possible operations?
5. How seriously ill is she, in your opinion? What is her likely prognosis, based on what you have heard so far? (this would be a guess, of course)

Answers:

1. This is likely to be carcinoma of the rectum. Her vitamin D deficiency from never being exposed to sunlight may have contributed to the risks for her acquiring this disease.
2. You may be able to palpate the cancer with your examining finger (or it may be higher up and not palpable).
3. Colonoscopy with biopsy of any lesions noted. Abdominal and pelvic CT scans to help with staging the cancer.
4. Yes, she will likely need a resection of her carcinoma and a lymph node dissection
5. She is very seriously ill because if this is cancer it may already be rather large, as it is partially obstructing her rectum, causing those pencil-thin stools. A surgical resection may not be curative, and she may need radiation therapy and/or chemotherapy as well (often with 5-fluorouracil)

Scenario 3: Allison

Questions:

1. What are the many possibilities that this could be?
2. What tests would you recommend?
3. How high is your level of concern about this relatively young woman?

4. Might she need surgery?

Answers:

1. Cancer of the gallbladder, cancer of the liver with bile duct obstruction, gallstones with a stone in the common bile duct
2. Ultrasound of the gallbladder and liver, or possibly a CT scan if the ultrasound does not provide adequate information about what is going on
3. It is very high. She may have cancer. If so, these kinds of cancer are particularly lethal.
4. Yes, she will likely need surgery, with the nature of the operation depending on what is present.

Scenario 4: Sara

Questions:

1. Do you think her back pain is due to some musculoskeletal disorder or postural strain?
2. If not, what is your presumptive diagnosis?
3. What tests would you recommend to establish the diagnosis?
4. How might her history be related to what is going on?
5. If you are right about your diagnosis, what treatment might be indicated?

Answers:

1. No, this does not seem like a muscular strain, which usually affect the lumbar area.
2. Possible cancer of the pancreas, with anemia secondary to the cancer, and heart murmur secondary to the anemia
3. CT scan of the pancreas, pancreatic enzyme tests (amylase, lipase); possible ERCP (endoscopic retrograde cholangiopancreatography) and biopsy of any lesions noted

4. Her smoking and alcohol consumption placed her in a higher risk than normal for pancreatic cancer
5. She may need resection of her pancreas (Whipple Procedure) with possible chemotherapy as well

CHAPTER EIGHT: MUSCULOSKELETAL AND JOINT EXAMINATION

Scenario 1: Brenda

Questions:

1. What is your diagnosis?
2. What microorganism would you suspect is likely causing this infection?
3. Might the social conditions in her healthcare environment have contributed to this problem she is dealing with?
4. How seriously ill is Brenda?
5. How aggressive must the treating physicians be in dealing with this problem?

Answers:

1. Septic arthritis of the left hip joint
2. The most likely organism is Staphylococcus
3. Yes, because she has been rushed through her IV feedings there might have been a break in sterile technique, introducing organisms which then travelled along the IV catheter into the bloodstream
4. She is extremely ill. Septic arthritis is life-threatening, especially in such a large joint as the hip.
5. They must be very aggressive, performing surgical drainage of the infected joint, placing irrigating catheters into the joint and infusing the joint with antibiotics, then giving powerful broad spectrum IV antibiotics as well, then changing the antibiotics based on the culture and sensitivity reports of the drainage as soon as this information comes back (usually in 48-72 hours).

Scenario 2: Skip

Questions:

1. What is your first presumptive diagnosis?
2. What specific test might be more confirmatory than just an examination of the extremity?
3. What would be the western medicine options for treating this patient?
4. Will Skip have to stop cutting up meat for awhile?

Answers:

1. DeQuervain's syndrome, with pain in the thumb and the thenar eminence of the hand.
2. The Finkelstein test: flex the thumbs across the hand and close the other four fingers on the thumbs, then put closed hands together and flex the wrists laterally away from the midline (towards the ulnar side). This causes sharp pain in the thumbs if the patient has this syndrome.
3. Rest of the hands (no meat cutting) for several weeks may be necessary, and if the pain is severe the wrist and thumb can be protected with splints or even a spica wrist cast. Ice, anti-inflammatory NSAIDS medications, and steroid injections into the base of the thumb may be tried, but do not always help. The condition may last for up to one year, then goes away on its own. Operative release of the tendon sheaths has also been tried in severe cases and can sometimes be successful in resolving the pain and tenderness.
4. Yes, as noted above

Scenario 3: Sandy

Questions:

1. What is your presumptive diagnosis? Should you have more than one?
2. What diagnostic studies might you wish to obtain to do a complete workup for this complaint?
3. What specific questions would you want to ask her about her health and her lifestyle?

Answers:

1. This is classic for a Morton's neuroma. It could also be a stress fracture of one of the toes or one of the matacarpals, associated with her jogging.
2. X-rays of the foot.
3. Ask her about her shoes. They may be too tight, and the high heels may be aggravating her feet (a Morton's neuroma is uncommon in men, because they do not wear such shoes). If she is jogging for many miles every day she may be developing premature osteoporosis. Ask her if she is still having periods or not. If not, this may imply she is exercising too much and the osteoporosis that can result from such overactivity can lead to stress fractures.

Scenario 4: Denise

Questions:

1. What are your presumptive diagnoses? Which diagnosis is on the top of your list?
2. What physical exam tests should you perform?
3. What laboratory studies would be helpful?
4. If this turns out to be what you think it is, what is her prognosis?

Answers:

1. This is classic for fibromyalgia. It could less likely be rheumatoid arthritis, or lupus, but the absence of inflammation rules against these illnesses. If could be degenerative arthritis, but this is also unlikely in this young woman.
2. Palpate all the 18 trigger points noted in fibromyalgia and see how many are tender. If 11 or more are tender this strongly suggests this diagnosis is correct.
3. Tests for autoimmune disorders, such as LE prep test, RF (rheumatoid factor), Smith factor (for lupus), CRP (c-reactive protein), ANA (antinuclear antibody), etc. These are generally negative in fibromyalgia, and positive in other conditions as noted above.

4. She is likely to have this for the rest of her life, and should accommodate by engaging in stress reduction, sleep therapy (these patients often have unrefreshing sleep, which can aggravate the symptoms), rest as needed, obtaining the support of others. Various medications are being studied for this condition, and some have shown beneficial effects (including marijuana, THC, in controlled doses).

CHAPTER NINE: NEUROLOGICAL EXAMINATION

Scenario 1: Margaret

Questions:

1. What are your thoughts about your mother, and what seems to be happening to her?
2. What do you do next?
3. Do you call someone else?
4. What plans do you immediately formulate in this situation?
5. What is the likely prognosis for your mother, if nothing worse happens than has already taken place? What treatment might she receive?

Answers:

1. It sound like she is experiencing a stroke affecting her dominant side
2. Tell your mother to lie down. Tell her you will call 911. You may say you think she may be having a stroke but she will likely be all right once they get her to the hospital for treatment.
3. You call 911.
4. You tell the dispatcher what is going on with your mother so they can pick her up and bring her in to the ER for diagnosis and treatment. Tell them about her husband, who is not mentally competent, who will also need to be taken care of. The paramedics will also have to gently get him up and probably take him with them as well, or call a second ambulance to take him to the hospital, where he can be assigned immediately to a social worker for proper 24-hour care while his wife is in the hospital.

5. Her prognosis is guarded but hopeful, if she can get prompt treatment. If this is an ischemic stroke she will likely need anticoagulant therapy with rTPA (tissue plasminogen activator).

Scenario 2: Marvin

Questions:

1. Is this a red flag case?
2. What is your diagnosis?
3. What do you need to do?
4. How are the potential family dynamics a factor?

Answers:

1. It is a subacute red flag. He needs to be seen by a physician urgently, but not emergently.
2. Alcohol abuse syndrome (alcoholism), with alcoholic dementia, alcoholic neuropathy, and cirrhosis.
3. Best to talk to him seriously that he is very sick from his alcohol consumption and it is critically important that his wife be informed. Ask him for permission for you to call her and have her come in for an appointment with him, either now or tomorrow. She needs to know what is going on. Then arrange for him to see a physician the next day.
4. He is in control and his wife then becomes a facilitator of his alcohol abuse by supporting him and not stopping him from drinking (although she is not yet aware how much she is a facilitator). They need to work together to help him get over his alcohol abuse before it becomes any more serious. He will likely go to a detox center.

Scenario 3: Evelyn

Questions:

1. What is your presumptive diagnosis?
2. What is this patient at risk for experiencing in the future?
3. Is this a red flag case? Why?

Answers:

1. Transient global aphasia
2. She is at risk for a more serious stroke with possible paralysis and other neurological impairments that do not go away as this event did.
3. It is a red flag because of the risk of a more serious stroke.

Scenario 4: Randy

Questions:

1. What are the possible causes for his symptoms?
2. What physical examination tests would you perform?
3. What x-rays or other diagnostic tests would be appropriate?
4. Might Randy possibly benefit from surgery for this condition (depending on what it turns out to be)?

Answers:

1. The most likely cause is a thoracic outlet syndrome. Other possibilities include nerve root compression from cervical spine trauma in the past with hypertrophic spurs form the trauma, and unlar nerve entrapment at the elbow.
2. An Adson's test for thoracic outlet syndrome (arm out straight with elbow flexed at right angle, straight out from the body. Then palpate the radial pulse while bending the flexed arm backwards. An immediate obliteration of the pulse suggests thoracic outlet syndrome. Also perform ulnar nerve conduction studies and electromyography.
3. A chest x-ray for a possible cervical rib, which could cause this compression of the ulnar nerve.
4. Yes, he might need a first rib resection, which would resolve the problem if it is a thoracic outlet syndrome. He could need resection of hypertrophic spurs in the neck.

CHAPTER TEN: EXAMINATION OF THE SKIN

Scenario 1: Angela

Questions:

1. What is your presumptive diagnosis of this young woman's skin lesions?
2. What are your thoughts about her likely prognosis? If you find these thoughts about her clinical situation to be personally disturbing, that would be understandable. However, remember that you must remain in control. You may even want to take a short break. You are the competent authority she has come in to see concerning this problem.
3. What are your recommendations to her about referral, likely further testing, and probable treatment in the near future?

Answers:

1. Malignant melanoma, advanced, with local satellite metastases, and groin lymph node and liver distant metastases.
2. You are going to be literally blown away by the sudden realization that this lovely human being, with her two small children who are so in need of their mother, is almost certainly going to die soon because of her fatal disease process. You may need to take a moment to be by yourself to get back in full control of your own emotions, if you feel intense compassion for your patients who have serious problems. You have to remain in charge and be as strong and as optimistic as possible under the circumstances.
3. She needs urgent referral to a general surgeon, who will perform a biopsy to confirm the diagnosis and then schedule a resection of this lesion and groin lymph nodes, followed by chemotherapy. Her prognosis is nonetheless extremely grim. She should have acupuncture and herbal therapy during her course of Western medical treatments.

Scenario 2: Harry

Questions:

1. What is your differential diagnosis (list at least two possible diagnoses)?
2. As an LAc, should you commence treatment of these lesions, or do something else to process the medical workup and treatment of this patient?
3. If so, what?

Answers:

1. Basal cell carcinoma of the face; squamous cell carcinoma of the face
2. No, you should not treat these lesions as they are probably cancerous.
3. You should perform a complete medical evaluation and then refer him to a dermatologist for removal of these lesions and biopsy. Your own back-up treatments may be very helpful, but he also needs to get these lesions surgically removed.

CHAPTER ELEVEN: BE ON THE LOOKOUT FOR RED FLAG CASES

Scenario 1: Ricardo

Questions:

1. What are the possibilities as to what might be going on, here? Bear in mind his symptoms may be worse than he is reporting to you on the phone.
2. Is whatever that's happening at the moment necessarily related to your acupuncture treatment? If not, what else might be causing his symptoms?
3. What should you advise him to do?

Answers:

1. This is likely to be a pneumothorax.
2. Yes, this is probably due to your needling. You cannot assume otherwise. The second most likely possibility is that he is having an acute asthmatic attack. The third is that this is a spontaneous pneumothorax from a ruptured emphasematous bleb; a congenital enlargement in the apex of one of his lungs, that can break in teenage boys (mostly likely in boys or young men from teenage to early twenties) and cause a pneumothorax.

3. Tell him to have someone else drive him to the ER. Insist he not drive himself. Overcome his objections and tell him he must go to the ER. Ask him to tell them he may have a collapsed lung from an acupuncture treatment. Then you call the ER yourself and tell the admitting nurse he is coming in. (be sure to speak to the admitting nurse!). We suggest you then drive to the ER yourself to visit with him and provide as much support as possible. He will appreciate your caring and concern in this situation. This will be supportive for him and also will likely soften any later legal action taken against you over this case.

Scenario 2: Marjorie

Questions:

1. Given that she is not having actual chest pain, what do you think is going on?
2. Is there more than one possibility?
3. If so, what are they?
4. What should you do?
5. How serious might this be?

Answers:

1. She is likely having an acute myocardial infarction, in spite of her attacks without pain
2. Yes.
3. It could be a panic attack, or a cardiac arrhythmia. It could be hypoglycemia. There are also other more rare things it could be (a pheochromocytoma with hypertensive spells, for example)
4. Call 911, because you cannot rule out a heart attack
5. Her life is in severe danger

Scenario 3: Hattie

Questions:

1. What is your presumptive diagnosis, or diagnoses?

2. What should you do now?

Answers:

1. Calcific aortic stenosis. She could also be having a heart attack, or at least severe coronary artery ischemia from this problem.
2. Lie her down. Check her pulse and blood pressure and assess her breathing. Give oxygen if she is dyspneic or appears pale. Ask her if she has any chest pain, or feels sweaty or clammy. Use your clinical skills to determine whether or not she is in acute distress after she wakes up.
3. Call 911 if she seems unstable to you. If not, call her medical doctor or a cardiologist you know and see that she is seen within the next 2-3 days to evaluate this clinical condition.

Scenario 4: Denny

Questions:

1. What do you think is going on?
2. List as many possible causes of his vomiting blood as you can.
3. What should you do now?
4. How urgent is this situation? Should you continue on with his treatment as he suggests?

Answers:

1. He is likely bleeding from esophageal varices; one of the most severe and life-threatening forms of upper GI bleeding.
2. Other possibilities include a bleeding gastritis, a duodenal ulcer, or a gastric cancer
3. Call 911. You must anticipate that he might vomit again in a few minutes; this next time it might be a quart of blood! If so, his life would then be in grave danger.
4. This is clearly a life threatening situation. Discontinue your treatment at once, and remove all needles. Try not to alarm him any more than necessary, and stay calm yourself, but inform him you need to get him to a hospital right away because of his bleeding.

APPENDIX 1: HEMATOLOGY, BLOOD CHEMISTRY AND OTHER LABORATORY TESTS

These clinical scenarios are not in the book. However, both instructors and practitioners may find the study of this information useful.

Scenario 1: Rita is 83 year old widow who comes to see you complaining of tiredness. "I'm thought of as a spry old lady by my family and friends," she tells you. "I've always had a ton of energy. Now, the past six months, I have been feeling run down. Sure, we all get tired, but this is more than that. I just feel exhausted all the time. I wonder what's wrong!" She denies any other symptoms. Her weight has been stable. She is slender, and has always been so. Her PE is entirely normal for her age, with a blood pressure of 150/88 and regular pulse of 92/min. Her thyroid is normal to palpation and abdominal exam is unremarkable. You proceed with a chem. panel, urinalysis, CBC and thyroid panel. Everything comes back normal with the exception of the fact she is anemic, with a hemoglobin of 9.5 gms and a hematocrit of 28. Her RBC indices suggest this is a microcytic anemia. You then order a stool guiac, which is positive times three (positive on three different stool specimens) although the stools were brown and not black.

Questions:

1. With a normal physical exam and no symptoms other than tiredness, what may be going on, here?
2. What diagnostic tests are warranted to establish the diagnosis?
3. Might she possibly need surgery in the future? What operation?

Answers:

1. She is anemic. This is at least one of the causes of her extreme tiredness. If she has cancer this could be another cause for tiredness (see below).
2. She likely has an occult blood loss from something, perhaps a tumor of the intestinal tract (probably colon), or vascular ectasia, which can also cause occult bleeding. She should undergo colonoscopy. If this is normal, she should have upper GI endoscopy.
3. She might need surgery, possible a colectomy with resection of her tumor or her vascular ectasia of the colon.

Scenario 2: Teresa is a 20 year old college student who has a mild case of lupus, well-controlled with no medications at present. She has developed a relationship with a smoke jumper who works for the Bureau of Land Management. After she has moved in with David and lived with him for three months he confesses to her one evening after they have had sex that he is HIV positive. She had asked him if he has AIDS on their first date when she went back to his apartment with him, and he said no. In Roger's mind this was technically correct, so he did not tell her the whole truth about his status. Because of his reassurances they never used condoms. Devastated and terrified after Roger's disclosure, Teresa gets dressed and walks out of Roger's life forever. She goes to the medical clinic and gets an ELISA test for HIV, which is positive.

Questions:

1. Does the positive ELISA test mean for certain that she herself is now HIV positive?
2. Should she have any other tests, or not? What test or tests?
3. What if she had been ELISA negative? Would this prove she did not have HIV?
4. Teresa has obviously learned a big lesson the hard way. What is her likely prognosis if she is, in fact, HIV positive?

Answers:

1. It is highly likely that she is HIV positive. However she might also have a false positive test from lupus, mononucleosis, or some other medical condition.
2. Yes, she should have a Western blot test to confirm the diagnosis that she is HIV positive.
3. No. It may sometimes take several weeks or even months to convert to positive if one actually has HIV.
4. She will eventually come down with AIDS, many years from now, which will ultimately be fatal.

Scenario 3: Fatima is a 43 year-old nurse who works in the hospital. She is rather overweight, although not actually obese, weighing 175 pounds (she is 5'7"). She's been troubled lately with fatty food intolerance, with right upper quadrant and right shoulder pain when she consumes fatty foods which lasts for an hour or so and then subsides. It seems to be getting worse in recent weeks. She has not bothered to have a medical workup. Fatima awakens one morning with more generalized right sided-abdominal pain with chills and feelings that she has a fever. She checks her temperature and it is 101 degrees. She looks in the mirror and thinks she looks a bit yellow, especially in the whites of the eyes. When she goes to the bathroom her urine is dark brown. She pats her right upper abdomen and it is tender. She discusses her situation with a physician who works in the hospital and he orders hematology and blood chemistry tests. Her white blood count comes back 16,700 cells/mm3, with 75% PMN's and 25% lymphocytes. Her hemoglobin is 14 grams and her hematocrit is 42 percent. Her serum bilirubin is 5.5 mg/dL.

Questions:

1. What is your leading presumptive diagnosis? What secondary diagnoses cover what else it could be?
2. What other tests are warranted here?
3. What serious problem could happen if she remains untreated for her condition?
4. Might she require surgery? If so, what?

Answers:

1. She most likely has acute cholecystitis and common bile duct obstruction from an impacted gallstone. She could have hepatitis, type A, B, or C, but this is less likely, especially because of the elevated white blood count (not often seen with acute viral infections).
2. Ultrasound of the gallbladder and the bile ducts. Liver function tests. If the ultrasound is negative she should have antibody tests for hepatitis.
3. Her gallbladder could rupture.
4. Yes. She may need a cholecystectomy and a common bile duct exploration with removal of all gallstones.