42/50 = 84%

Temple University School of Medicine
Department of Pathology and Laboratory Medicine
Pathology (D305) Lecture Examination III
November 13, 2008

IMPORTANT: Read the following instructions.

1. Fill in your name and the last four digits of your Temple identification number on your answer sheet and darken the corresponding circles with a #2 pencil.

2. There are fifty (50) items (questions) on this examination. There is only one answer to each item. Choose the best correct answer to a question or response to finish the statement of each item.

3. Use a #2 pencil to mark your answers on your answer sheet. Mark your answer right after you chose one. There is no extra time at the end of the examination. The examination time is one hour.

4. Keep your eyes on your own examination paper and answer sheet. Place your own examination paper and answer sheet on your table top and prevent them from being exposed to others.

5. Students are not allowed to bring electronic devices or other miscellaneous items to the examination.

6. Proctors are not allowed to explain questions during examination.

Property of Everyone

1. Which of the following is the least likely cause of right-sided heart failure?

RH valve disease

A. A dysfunctional tricuspid valve
B. A dysfunctional aortic valve
C. A dysfunctional pulmonary valve
D. Primary diseases of the lung interstitium
E. Left-sided heart failure due to ischemic heart disease

RH valve disease

ie. cardiomyopathies

HF = the inability to supply sufficient blood flow to meet the bodies need
∅ myocardial infarct, ∅ cardiac arrest
However, an infarct can cause HF, also: hypertension, ischemic diseases, valve disease, cardiomyopathy (ie. heart muscle disease)

★ LHF is the most common cause of RHF ! ★

2. During heart failure, an important physiologic compensatory mechanism is:

A. increased production of parathyroid hormone to increase serum calcium.
B. increased production of thyroxin to increase metabolic rate.
C. increased production of high molecular weight kininogen by the liver.
D. increased levels of renin and aldosterone in the kidney to increase fluid volume.
E. increased production of neutrophils by the bone marrow.

3. Prinzmetal's angina is caused by:

A. vasospasm of coronary arteries.
B. *Staphylococcus aureus*.
C. myocardial infarction.
D. rheumatic fever.
E. a thrombus associated with an atherosclerotic plaque.

4. Which of the following would be the most common manifestation of a patient with a failing left ventricle?

A. Hyperperfusion of the kidney
B. Distended neck veins
C. Centrilobular necrosis of the liver
D. Portal hypertension
E. Pulmonary congestion and edema

5. External rupture of the heart results in:

A. mitral valve prolapse.
B. valvular vegetations.
C. cardiac tamponade.
D. calcific aortic stenosis.
E. Tetralogy of Fallot.

6. Chronic cor pulmonale is caused by:

A. a large "saddle" pulmonary embolus.
B. lung diseases that cause slow progressive pulmonary hypertension.
C. bone marrow transplant.
D. lymphoma.
E. a massive myocardial infarct of the left ventricle.

7. Ventricular septal defects:

A. are the least common cardiac defect at birth.
B. initially give rise to a right to left shunt, that later becomes a left to right shunt.
C. initially give rise to a left to right shunt, that later becomes a right to left shunt.
D. cause a baby to be cyanotic at birth.
E. are most commonly caused by acute bacterial endocarditis.

8. Subacute bacterial endocarditis:

A. typically occurs in intravenous drug abusers.
B. is most commonly caused by *Staphylococcus aureus*.
C. rapidly progresses to death of a patient despite antiobiotic treatment.
D. can give rise to infected emboli.
E. occurs exclusively in healthy hearts.

9. The tetralogy of Fallot:

A. is congenital defect of the heart that causes a left to right shunt.
B. typically causes cyanosis about 1 year after birth once the right to left shunt fully develops.
C. has as its principal problem a transposition of the great vessels.
D. is more serious clinically when the pulmonic valve exhibits greater stenosis.
E. has as its principal problem a patent ductus arteriosus.

10. Cardiac vegetations:

A. are small fibrin clots on inflamed, damaged surfaces of valves.
B. are small myocardial tumors that protrude into the left ventricle.
C. are zones of inflammation within the myocardium caused by Coxsackie virus infection.
D. are fibrin clots and organizing granulation tissue that occur on the pericardium.
E. occur in the right ventricle as part of cor pulmonale.

11. Reticulocytosis:

A. is an increase in hepatocytes due to viral hepatitis.
B. is an increase in macrophages at the site of inflammation.
C. is a decrease in circulating lymphocytes due to a viral infection.
D. is an inherited disease of platelets that prohibits platelet aggregation.
E. is an increase of immature red blood cells in the circulation.

12. Which of the following types of anemia is typically associated with minimal bone marrow hyperplasia?

A. Iron deficiency anemia
B. Thalassemia major
C. HbH disease
D. Severe immune-mediated hemolytic anemia
E. Sickle cell anemia

13. A point mutation at the 6th position of the hemoglobin beta chain that replaces glutamic acid with a valine residue is the basis for which of the following diseases?

A. Glucose-6-phosphate dehydrogenase deficiency
B. Thalassemia minor
C. Sickle cell anemia
D. Hereditary spherocytosis
E. HbH disease

14. Pernicious anemia is caused by:

A. a lack of iron in the diet.
B. an inadequate amount of functional intrinsic factor.
C. a defect in the structure of ankyrin.
D. a deficiency in glucose 6-phosphate dehydrogenase.
E. inadequate synthesis of hemoglobin alpha chains.

15. Thalassemia major:

A. is inherited as an X-linked disease.
B. is caused by a homozygous gene defect resulting in very little or no synthesis of hemoglobin beta chains.
C. is caused by a complete lack of synthesis of hemoglobin alpha chains.
D. typically causes death in utero.
E. is a type II hypersensitivity autoimmune disease.

16. Greater than normal numbers of circulating eosinophils are typically observed in:

A. allergic reactions.
B. impetigo.
C. acute endocarditis.
D. viral infections.
E. acute periapical abscesses.

17. Small lymphocytic lymphomas:

A. are characterized by the presence of Reed-Sternberg cells.
B. are composed of T cells exclusively.
C. overexpress the bcl-2 (anti-apoptosis).
D. are the same disease as chronic lymphocytic leukemia.
E. are usually diagnosed by the presence of Bence-Jones protein in the urine.

18. Burkitt lymphoma:

A. is a low-grade neoplasm that cannot be treated.
B. is derived from neoplastic T cells.
C. is characterized by the presence of the Philadelphia chromosome.
D. is associated with EBV and a translocation involving the MYC oncogene.
E. is usually detected by the presence of Bence-Jones protein in the urine.

19. Hodgkin lymphoma:

A. is now believed to be a T-cell lymphoma.
B. is a disease that starts in a lymph node and spreads to contiguous nodes.
C. is incurable.
D. is associated with high levels of circulating IgG (M component).
E. is caused by human papilloma virus types 16 and 18.

20. Amyloid deposits that occur in multiple myeloma consist of:

A. fragments of partially degraded keratin.
B. lipofuscin.
C. immunoglobulin light chains.
D. viral particles.
E. fragments of fibrinogen.

21. Partial thromboplastin time (PTT) is a laboratory measure of:

A. the effectiveness of the intrinsic and common pathways of coagulation.
B. the effectiveness of the extrinsic and common pathways of coagulation.
C. the shape of erythrocytes in hereditary spherocytosis.
D. platelet aggregation.
E. the amount of fibrin in the blood.

22. Thrombocytopenia can be caused by:

A. leukemias.
B. mutated von Willebrand factor.
C. excess amount of prothrombin.
D. increased blood vessel fragility.
E. atherosclerosis.

23. An acute process that results in microinfarcts and a serious bleeding disorder best describes:

A. sickle cell anemia.
B. thrombocytopenia.
C. a deficiency of thrombin.
D. disseminated intravascular coagulation.
E. thalassemia major.

24. Which of the following proteins in the circulation helps stabilize factor VIII?

A. Factor IX
B. Albumin
C. Fibrinogen
D. Prothrombin
E. von Willebrand factor

25. A deficiency of factor VIII would be expected to result in:

A. prolonged prothrombin time.
B. prolonged bleeding time.
C. prolonged partial thromboplastin time.
D. petechiae.
E. disseminated intravascular coagulation.

26. Compression atelectasis can result from:

A. emphysema.
B. chronic bronchitis.
C. loss of production of surfactant.
D. pneumothorax.
E. interstitial fibrosis.

27. Hyaline membranes are characteristically observed in:

A. chronic bronchitis.
B. emphysema.
C. tuberculosis of the lung.
D. bronchogenic carcinomas.
E. acute respiratory distress syndrome.

28. Emphysema is believed to be caused by:

A. multiple infarcts in the lungs.
B. acute respiratory distress syndrome.
C. loss of elastin in the walls of respiratory bronchioles and/or alveoli.
D. upper respiratory tract infections.
E. a chronic lung abscess.

29. Sarcoidosis is:

A. an obstructive lung disease.
B. a granulomatous inflammation with no caseous necrosis.
C. mucous gland hyperplasia with thick mucus plugs.
D. a type I hypersensitivity reaction.
E. the outcome of lobar pneumonia.

30. Small cell carcinoma of the lung:

A. is a type of well-differentiated squamous cell carcinoma.
B. is best treated by surgery.
C. rarely metastasizes.
D. is of neuroendocrine origin.
E. has a 5 year survival rate of 95%.

31. Which of the following cancers has a strong association with Epstein-Barr virus (EBV)?

A. Nasopharyngeal carcinoma
B. Large cell undifferentiated carcinoma of the lung
C. Adenocarcinoma of the lung
D. Squamous cell carcinoma of the larynx
E. Squamous cell carcinoma of the lung

32. A common outcome of restrictive lung diseases is:

A. squamous cell carcinoma of the lung.
B. pulmonary hypertension.
C. increased production of parathyroid hormone.
D. compression atelectasis.
E. emphysema.

33. Bronchogenic carcinomas:

A. can give rise to a paraneoplastic syndrome.
B. most commonly metastasize via the bloodstream.
C. are caused by bacterial infections of the bronchus.
D. are all treated most effectively by chemotherapy.
E. do not metastasize.

34. Chylothorax:

A. is due to a loss of surfactant in pulmonary alveoli.
B. typically results from rupture of an aortic aneurysm.
C. raises suspicion of metastatic cancer.
D. is the most common complication of asthma.
E. is the principal cause of restictive atelectasis.

35. Atypical pneumonia:

A. is caused by *Staphylococcus aureus*.
B. is a combination of bronchopneumonia and lobar pneumonia.
C. involves only one side of the lung.
D. is pneumococcal pneumonia that follows an upper respiratory tract infection.
E. is caused by a viral or chlamydial infection, limited to alveolar septa.

36. Jaundice occurs when there is an elevation in:

A. serum bilirubin.
B. serum globulin.
C. serum albumin.
D. serum sodium.
E. serum iron.

37. Feco-oral transmission of viral hepatitis is caused by:

A. hepatitis A virus.
B. hepatitis B virus.
C. hepatitis C virus.
D. hepatitis D virus.
E. herpes simplex virus.

38. Exposure to infected blood or body fluids causes viral hepatitis with:

A. hepatitis A virus.
B. hepatitis B virus.
C. hepatitis E virus.
D. cytomegalovirus.
E. human papilloma virus.

39. The most common cause of cirrhosis in the US is:

A. alcohol abuse.
B. cigarette smoking.
C. systemic hypertension.
D. congenital liver disease.
E. gallstones.

40. Cirrhosis of the liver results in:

A. anemia.
B. diarrhea.
C. anorexia.
D. ascites.
E. systemic hypertension.

41. Predisposing factors in the development of hepatocellular carcinoma include:

A. smoking.
B. severe atherosclerosis.
C. portal hypertension.
D. hepatitis B infection.
E. gallstones.

42. The histologic hallmark of cirrhosis is:

A. fibrosis and nodularity.
B. Mallory bodies.
C. eosinophilic globules.
D. iron deposition.
E. cholestasis.

43. Gallstones most often produce:

A. diarrhea.
B. vomiting.
C. constipation.
D. skin rash.
E. obstructive jaundice.

44. The major risk factor for acute pancreatitis is:

A. viral hepatitis.
B. elevated serum bilirubin.
C. carcinogens in food.
D. alcohol abuse.
E. elevated serum cholesterol.

45. Cancer of the pancreas:

A. is the most common tumor of the gastrointestinal tract.
B. has a very low mortality rate.
C. is usually a sarcoma.
D. usually presents with abdominal distension.
E. often presents with obstructive jaundice.

46. Budd-Chiari syndrome results from obstruction of:

A. terminal hepatic venule.
B. zone 3 sinusoids.
C. hepatic artery.
D. portal vein.
E. bile duct.

47. Hemochromatosis is a metabolic disease resulting in increased deposits in different organs of:

A. iron.
B. copper.
C. bile.
D. calcium.
E. lead.

48. Autoimmune hepatitis is best treated with:

A. interferon.
B. intravenous gamma globulins.
C. chelating agents.
D. corticosteroids.
E. methotrexate.

49. Alpha 1 antitrypsin deficiency results in:

A. hepatitis and asthma.
B. venoocclusion and heart failure.
C. zone 3 necrosis and seizures.
D. cirrhosis and emphysema.
E. massive hepatic necrosis and pulmonary edema.

50. The most significant risk factor for cholangiocarcinoma is:

A. dietary factors.
B. alcohol.
C. aflatoxin.
D. primary biliary cirrhosis.
E. primary sclerosing cholangitis.