

*Test Bank for Comprehensive
Radiographic Pathology 8th Edition by
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Test Bank - Chapter 01

Q1: A disease process caused by physicians or their treatment is:

- A. idiopathic.
- B. iatrogenic. (Correct)**
- C. neoplasia.
- D. community acquired.

Rationale: A disease process caused by physicians or their treatment is iatrogenic.

Q2: A basic reaction of the body to some form of injury is a:

- A. disease process. (Correct)**
- B. pathology.
- C. study of diseases.
- D. idiopathic process.

Rationale: A disease is the pattern of the body's response to some form of injury.

Q3: What term is used to denote a disease in which the underlying cause is unknown?

- A. Idiopathic (Correct)**
- B. Antietiologic
- C. Iatrogenic
- D. Nosocomial

Rationale: Idiopathic diseases are those with an unknown, or as of yet unidentified, cause.

Q4: Alterations of cell growth, specifically an abnormal proliferation of cells, is called:

- A. hyperplasia.
- B. dysplasia.
- C. neoplasia. (Correct)**
- D. aplasia.

Rationale: Alterations in cell growth lead to the development of neoplasms (tumors).

Q5: The initial response of body tissues to local injury is:

- A. infection.
- B. ischemia.
- C. edema.
- D. inflammation. (Correct)**

Rationale: Inflammation is the initial response of body tissues to local injury.

Q6: Heat and redness associated with inflammation are produced by:

A. hyperemia. (Correct)

B. scar tissue.

C. hyperplasia.

D. infarction.

Rationale: Hyperemia produces the heat and redness associated with inflammation.

Q7: In an injury, the destroyed tissue is replaced with:

A. granulomatous inflammation.

B. granulation tissue. (Correct)

C. phagocytes.

D. pyogens.

Rationale: A fibrous scar replaces the area of destroyed tissue with granulation tissue. Granulation tissue refers to a combination of young, developing capillaries and actively proliferating fibroblasts, which produce connective tissue fibers (collagen) that replace the dead tissue.

Q8: Of the five clinical signs of acute inflammation, the medical term for swelling is:

A. edema.

B. tumor. (Correct)

C. calor.

D. dolor.

Rationale: The five clinical signs of acute inflammation are rubor (redness), calor (heat), tumor (swelling), dolor (pain), and loss of function.

Q9: Some bacterial organisms produce _____ that cause damage to the tissue and incite the inflammatory process.

A. toxoids.

B. pyogens.

C. toxins. (Correct)

D. abscesses.

Rationale: Some bacterial organisms (such as staphylococci and streptococci) produce toxins that damage the tissues and incite an inflammatory response.

Q10: Chronic inflammation in a localized area, which often has centralized necrosis, is called:

A. an exudate.

B. a granuloma. (Correct)

C. an abscess.

D. hyperplasia.

Rationale: A granuloma is a localized area of chronic inflammation, often with central necrosis.

Q11: In acute inflammation, the localized heat and redness at the site of injury are a result of:

- A. migration of circulating white blood cells.
- B. increased blood flow in microcirculation. (Correct)**
- C. regeneration of normal parenchymal cells.
- D. enzymatic digestion of dead cells.

Rationale: The localized heat and redness result from increased blood flow in the microcirculation at the site of injury.

Q12: In pyogenic infections, the body responds by producing a thick, yellow fluid called:

- A. bacteria.
- B. pus. (Correct)**
- C. edema.
- D. a scar.

Rationale: The presence of pyogenic bacteria leads to the production of a thick, yellow fluid called pus, which contains dead white blood cells, inflammatory exudates, and bacteria.

Q13: All pyogens can enter the blood circulation causing:

- A. bacteremia. (Correct)**
- B. phagocytosis.
- C. septicemia.
- D. keloid tissue.

Rationale: All pyogens, wherever they become implanted, have the ability can invade blood vessels to produce bacteremia, with the potential involvement of other organs and tissues in the body.

Q14: Connective tissue that contracts, produces a fibrous scar, and causes an obstruction in the abdomen is known as:

- A. keloids.
- B. suppurative inflammation.
- C. fibrous adhesions. (Correct)**
- D. hyperemia.

Rationale: Eventually the strong connective tissue contracts to produce a fibrous scar. In the abdomen, such fibrous adhesions can narrow loops of intestine and result in an obstruction.

Q15: An accumulation of abnormal amounts of fluid in the intercellular tissue throughout the body is called:

- A. bacteremia.

- B. elephantiasis.
- C. filariasis.
- D. edema. (Correct)**

Rationale: Edema is the accumulation of abnormal amounts of fluid in the intercellular tissue spaces or body cavities.

Q16: Generalized _____ occurs most frequently in patients with congestive heart failure, cirrhosis of the liver, and certain forms of renal disease.

- A. filariasis
- B. edema (Correct)**
- C. elephantiasis
- D. fibrous adhesions

Rationale: Generalized edema occurs most frequently in patients with congestive heart failure, cirrhosis of the liver, and certain forms of renal disease.

Q17: An inflammation associated with pus formation is:

- A. bacteremia.
- B. phagocytosis.
- C. suppurative. (Correct)**
- D. hyperemia.

Rationale: Suppurative inflammation is associated with pus formation.

Q18: The protein-rich fluid associated with swelling in an inflammatory process is:

- A. exudate. (Correct)**
- B. transudate.
- C. pus.
- D. permeable.

Rationale: The inflammatory exudate in the tissues results in the swelling associated with inflammation. The protein-rich exudate of inflammation must be differentiated from a transudate, a low-protein fluid, such as that seen in the pulmonary edema that develops in congestive heart failure.

Q19: The low-protein fluid associated with the inflammatory process as seen in pulmonary edema is called:

- A. an abscess.
- B. exudate.
- C. transudate. (Correct)**
- D. filariasis.

Rationale: The protein-rich exudate of inflammation must be differentiated from a transudate, a low-protein fluid, such as that seen in the pulmonary edema that develops in congestive heart failure.

Q20: A localized area of ischemic necrosis within a tissue or organ produced by vascular occlusion is a(n):

- A. gangrene.
- B. infarct. (Correct)**
- C. purpura.
- D. ecchymosis.

Rationale: An infarct is a localized area of ischemic necrosis within a tissue or organ produced by occlusion of either its arterial supply or its venous drainage.

Q21: Depriving tissues of oxygen and nutrients caused by an arterial vessel narrowing is referred to as:

- A. ischemia. (Correct)**
- B. petechiae.
- C. filariasis.
- D. gangrene.

Rationale: Ischemia refers to an interference with the blood supply to an organ or part of an organ, depriving the organ's cells and tissues of oxygen and nutrients.

Q22: The progression of a loss of oxygen and nutrients resulting in tissue necrosis, especially in the diabetic's foot, is called:

- A. infarction.
- B. gangrene. (Correct)**
- C. ischemia.
- D. hemorrhage.

Rationale: Severe arterial disease of the lower extremities may result in necrosis of several toes or a large segment of the foot, a condition called gangrene. A frequent symptom in diabetic patients is ischemia of the foot, which may progress to infarction and result in gangrene.

Q23: A subcutaneous hematoma greater than 1 to 2 cm is called a(n):

- A. purpura.
- B. ecchymosis. (Correct)**
- C. petechia.
- D. infarct.

Rationale: A large (>1 to 2 cm) subcutaneous hematoma, or bruise, is called an ecchymosis.

Q24: An accumulation of blood trapped within the body tissues is known as a(an):

A. hematoma. (Correct)

- B. ecchymosis.
- C. petechiae.
- D. pleural effusion.

Rationale: Blood may be trapped within body tissues resulting in an accumulation called a hematoma.

Q25: Minimal bleeding into mucous membranes or serosal surfaces is referred to as:

A. petechiae. (Correct)

- B. hemorrhage.
- C. purpura.
- D. ecchymosis.

Rationale: Minimal hemorrhages into the skin, mucous membranes, or serosal surfaces are called petechiae.

Q26: The volume of blood loss, the rate of blood loss, and the site of blood loss will determine the significance of:

- A. anasarca.
- B. elephantiasis.
- C. atrophy.

D. hemorrhage. (Correct)

Rationale: The significance of hemorrhage depends on the volume of blood loss, the rate of blood loss, and the site of the hemorrhage. Sudden losses of up to 20% of the blood volume or slow losses of even larger amounts may have little clinical significance.

Q27: When a reduction in the size or number of cells in an organ occurs, this results in:

- A. aplasia.
- B. atrophy. (Correct)**
- C. hypoplasia.
- D. dysplasia.

Rationale: Atrophy refers to a reduction in the size or number of cells in an organ or tissue.

Q28: When cells fail to develop, reducing the size of an organ, the organ is considered:

A. hypoplasia. (Correct)

- B. dysplasia.
- C. hyperplasia.
- D. neoplasia.

Rationale: Failure of normal development accounts for small size in hypoplasia and aplasia.

Q29: Which term is used to describe an increase in the size of an organ or tissue in response to an increase in function?

- A. Neoplastic
- B. Hypotrophy
- C. Hyperplasia
- D. Hypertrophy (Correct)**

Rationale: Hypertrophy refers to an increase in the size of the cells of a tissue or organ in response to a demand for increased function.

Q30: The proliferation of granulation tissue to repair an injury is an example of:

- A. hypertrophy.
- B. anaplasia.
- C. hyperplasia. (Correct)**
- D. dysplasia.

Rationale: Hyperplasia is an increase in the number of cells in a tissue or organ. Proliferation of granulation tissue in the repair of injury is an example.

Q31: The Latin word for “new growth” is:

- A. tumor.
- B. seeding.
- C. neoplasia. (Correct)**
- D. ecchymosis.

Rationale: Neoplasia, from the Latin word for new growth, refers to an abnormal proliferation of cells that are no longer controlled by the factors that govern the growth of normal cells.

Q32: New growths that invade and destroy adjacent structures and have the ability to spread are considered:

- A. neoplastic.
- B. benign.
- C. cachexia.
- D. malignant. (Correct)**

Rationale: Malignant neoplasms invade and destroy adjacent structures and spread to distant sites (metastasize).

Q33: A polyp is a:

- A. projecting mass from an inner mucous membrane. (Correct)**
- B. malignant epithelial neoplasm.
- C. benign cartilaginous tumor.

D. cancer.

Rationale: An epithelial tumor that grows as a projecting mass on the skin or from an inner mucous membrane (such as the gastrointestinal tract) is termed a papilloma or a polyp.

Q34: A malignancy of glandular tissue, such as breast or liver, is referred to as a(n):

A. adenoma.

B. adenocarcinoma. (Correct)

C. cystadenoma.

D. dysplasia.

Rationale: Adenocarcinoma refers to malignancies of glandular tissues, such as the breast, liver, and pancreas, and of the cells lining the gastrointestinal tract.

Q35: The term derived from the Latin term for “crab” is:

A. benign.

B. oncology.

C. neoplasia.

D. cancer. (Correct)

Rationale: Malignant neoplasms of epithelial cell origin are called carcinomas, from the Greek word karbinos, meaning “crab.”

Q36: The study of neoplasms or tumors is called:

A. pathology.

B. radiology.

C. oncology. (Correct)

D. etiology.

Rationale: Neoplasms are commonly referred to as tumors; the study of neoplasms is called oncology, derived from the Greek word oncos, meaning “tumor.”

Q37: Tumors closely resembling their cells of origin in structure and function are called:

A. malignant.

B. benign. (Correct)

C. cancerous.

D. dysplastic.

Rationale: Benign tumors closely resemble their cells of origin in structure and function.

Q38: When tumor cells flourish, causing the patient to become weak and emaciated, this condition is referred to as:

A. cachexia. (Correct)

- B. petechiae.
- C. anorexia.
- D. anaplastic.

Rationale: Neoplastic cells act as parasites, competing with normal cells and tissues for their metabolic needs. Thus tumor cells may flourish, and the patient becomes weak and emaciated, a condition termed cachexia.

Q39: Benign epithelial neoplasms that grow in a glandlike pattern are:

- A. cystadenomas.
- B. adenocarcinomas.
- C. adenomas. (Correct)**
- D. fibromas.

Rationale: The term adenoma is applied to benign epithelial neoplasms that grow in glandlike patterns.

Q40: Tumors that contain muscle cells are called:

- A. myelomas.
- B. myomas. (Correct)**
- C. papilloma.
- D. hypertrophic.

Rationale: Myomas are tumors consisting of muscle cells.

Q41: Tumor cells of stratified squamous epithelium, which invade and destroy adjacent structures, make up:

- A. adenomas.
- B. sarcomas.
- C. cystadenomas.
- D. squamous cell carcinomas. (Correct)**

Rationale: Squamous cell carcinoma denotes cancer in which the tumor cells resemble stratified squamous epithelium.

Q42: If a neoplastic growth proliferates without form, it is considered:

- A. anaplastic. (Correct)**
- B. dysplastic.
- C. aplastic.
- D. hyperplastic.

Rationale: A tumor growing in a bizarre pattern is termed undifferentiated or anaplastic (without form).

Q43: Symptoms suggestive of esophageal or stomach cancer are:

- A. anasarca and dysphagia.
- B. anaplasia and anorexia.
- C. aplasia and gangrene.
- D. anorexia and dysphagia. (Correct)**

Rationale: Difficulty in swallowing (dysphagia) or loss of appetite (anorexia), especially if accompanied by rapid weight loss, suggests a neoplasm in the esophagus or stomach.

Q44: Diffuse spread of malignant neoplasms by invasion into a natural body cavity is called:

- A. tumor grading.
- B. staging.
- C. seeding. (Correct)**
- D. lymphatic spread.

Rationale: Seeding (diffuse spread) of cancers occurs when neoplasms invade a natural body cavity.

Q45: The major metastatic route of carcinomas is:

- A. lymphatic spread. (Correct)**
- B. undifferentiated spread.
- C. hematopoietic spread.
- D. hematogenous spread.

Rationale: Lymphatic spread is the major metastatic route of carcinomas, especially those of the lung and breast.

Q46: Assessing the aggressiveness or degree of malignancy is referred to as:

- A. staging.
- B. grading. (Correct)**
- C. seeding.
- D. metastatic.

Rationale: The grading of a malignant tumor assesses aggressiveness, or degree of malignancy.

Q47: To determine the most appropriate therapy, the disease process must be:

- A. seeded.
- B. staged. (Correct)**
- C. graded.
- D. phased.

Rationale: Staging refers to the extensiveness of a tumor at its primary site and the presence or absence of metastases to lymph nodes and distant organs, such as the liver, lungs, and skeleton. The staging of a tumor aids in determining the most appropriate therapy.

Q48: Using a combination of cytotoxic substances to kill neoplastic cells is called:

- A. radiation therapy.
- B. chemotherapy. (Correct)**
- C. hormonal therapy.
- D. seeding.

Rationale: Chemotherapy uses one or a combination of cytotoxic substances that kill neoplastic cells, but these drugs may injure many normal cells and result in significant complications.

Q49: The most common hereditary abnormality is:

- A. chromosomal aberration.
- B. enzyme deficiency. (Correct)**
- C. glycogen and lipid storage disease.
- D. sex-linked disorders.

Rationale: The most common hereditary abnormality is an enzyme deficiency.

Q50: Exposure to radiation, chemicals, or viruses may result in alterations in the DNA called:

- A. mutations. (Correct)**
- B. reduced penetrance.
- C. variable expressivity.
- D. aberrations.

Rationale: Mutations are alterations in the DNA structure that may become permanent hereditary changes if they affect the gonadal cells. Mutations may result from radiation, chemicals, or viruses.

Q51: A gene always producing an effect regardless of whether the person is homozygous or heterozygous is named:

- A. recessive.
- B. dominant. (Correct)**
- C. autosomal recessive.
- D. autosomal dominant.

Rationale: Dominant genes always produce an effect regardless of whether the person is homozygous or heterozygous.

Q52: When a vaccine or toxoid is used to counteract an antigen, it is considered:

- A. passive immunity.
- B. active immunity. (Correct)**

- C. community-acquired immunity.
- D. iatrogenic.

Rationale: In active immunity, a person forms antibodies to counteract an antigen in the form of a vaccine or a toxoid.

Q53: The body has the ability to combat antigens by forming _____ in the lymphoid tissue.

- A. antibodies
- B. toxins
- C. immunoglobulins
- D. antibodies and immunoglobulins (Correct)**

Rationale: The immune reaction of the body provides a powerful defense against invading organisms by allowing it to recognize foreign substances (antigens), such as bacteria, viruses, fungi, and toxins, and to produce antibodies or immunoglobulins to counteract them.

Q54: Hypotension and vascular collapse with urticaria, bronchiolar spasm, and laryngeal edema are characteristics of:

- A. anaphylactic reactions. (Correct)**
- B. cytotoxic reactions.
- C. histamine release.
- D. delayed reactions.

Rationale: Generalized, or systemic, anaphylactic reactions are characterized by hypotension and vascular collapse (shock) with urticaria (hives), bronchiolar spasm, and laryngeal edema.

Q55: Profound and sustained impairment of cellular immunity resulting in recurrent or sequential opportunistic infections is characteristic of:

- A. anaphylactic reactions.
- B. histamine release.
- C. AIDS. (Correct)**
- D. cytotoxic reactions.

Rationale: Acquired immunodeficiency syndrome (AIDS), which most commonly affects young homosexual men and intravenous drug abusers, is characterized by a profound and sustained impairment of cellular immunity that results in recurrent or sequential opportunistic infections.

Q56: The retrovirus known to contribute to AIDS is:

- A. hepatitis.
- B. human immunodeficiency virus. (Correct)**
- C. immunoglobulins.
- D. Kaposi sarcoma.

Rationale: AIDS is attributable to infection with retroviruses known as human immunodeficiency viruses (HIV).

Q57: A hazy, perihilar, granular infiltrate spreading to the lung periphery is the early radiographic finding of:

- A. AIDS.
- B. Kaposi syndrome.
- C. hepatitis.

D. Pneumocystis jirovecii pneumonia. (Correct)

Rationale: The typical early radiographic finding of P. jirovecii pneumonia is a hazy, perihilar, granular infiltrate that spreads to the periphery and appears preponderantly interstitial.

Q58: The modality of choice to demonstrate the multiple manifestations of AIDS in the central nervous system is:

- A. CT.
- B. nuclear medicine.
- C. ultrasound.

D. MRI. (Correct)

Rationale: MRI best demonstrates the multiple manifestations of AIDS in the central nervous system.

Q59: All of the following are personal protective equipment (PPE), except:

- A. gown.
- B. gloves.
- C. mask.

D. sharps container. (Correct)

Rationale: A sharps container is not used for personal protection against the transmission of diseases.

Q60: All of the following are additive diseases in terms of x-ray attenuation, except:

- A. pneumonia.

B. osteolytic metastasis. (Correct)

- C. callus.
- D. ascites.

Rationale: Osteolytic metastasis is a destructive disease.