

1) A 35-year-old healthy woman develops sudden severe abdominal pain. On physical examination she is afebrile. On palpation the pain is centered in the mid-epigastric region, though there is marked diffuse tenderness in all quadrants. Bowel sounds are absent. No masses are palpable. Laboratory studies show her serum lipase is 610 U/L. Which of the following laboratory test findings is most likely to indicate the risk factor for this woman's illness

- a) Hypocholesterolemia
- b) Positive urea breath test
- c) Hypercalcemia
- d) Elevated serum chloride
- e) Positive serology for HBsAg

2) A 44-year-old man, a lab technician, has felt fatigued for the past 4 months. On physical examination there are no remarkable findings. Laboratory studies show his hemoglobin is 14 g/dL and serum electrolytes normal, but he has a total protein of 5.4 g/dL, albumin 2.9 g/dL, ALT 132 U/L and AST 113 U/L with total bilirubin 1.3 mg/dL and direct bilirubin 0.8 mg/dL. A liver biopsy is performed and microscopic examination shows interface inflammation with extension of inflammation into the lobules from the triads. There is focal ballooning degeneration of hepatocytes. Which of the following laboratory test findings is most characteristic for his disease?

- a) Decreased serum alpha-1-antitrypsin
- b) Positive hepatitis B surface antigen
- c) Increased serum ferritin
- d) Decreased serum ceruloplasmin
- e) Positive antimitochondrial antibody

3) A 41-year-old man has experienced progressive fatigue, pruritus, and icterus for the past 4 months. He is also on list for an elective colectomy. On physical examination he is afebrile. Scleral icterus is present. Cholangiography reveals the widespread obliteration of intrahepatic bile ducts. A liver biopsy is performed and on microscopic examination shows periductular 'onion skin' fibrosis with a moderate lymphocytic infiltrate. Some intrahepatic bile ducts are obliterated, but there is no interface hepatitis. Which of the following underlying diseases is he most likely to have which was the indication for colectomy?

- a) Ulcerative colitis
- b) Systemic lupus erythematosus
- c) Wilson disease
- d) Hepatitis B viral infection
- e) Alpha-1-antitrypsin deficiency

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4) A 40-year-old man has a long history of chronic alcohol abuse. On physical examination his liver edge is firm on palpation of the abdomen, but liver span does not appear to be increased. An abdominal CT scan reveals a cirrhotic liver. He is at risk for development of which of the following diseases?

- a) Hepatic adenoma
- b) Cholelithiasis
- c) Hepatocellular carcinoma
- d) Non-Hodgkin lymphoma
- e) Hemangioma

5) A 22-year-old woman has had progressive malaise for the past year. She has become increasingly obtunded over the past week. On physical examination she is afebrile. Laboratory studies show a plasma ammonia of 55 micromol/L along with serum total bilirubin of 5.8 mg/dL, direct bilirubin 4.6 mg/dL, AST 110 U/L, and ALT 135 U/L. Her serum ceruloplasmin is 14 mg/dL. The antimitochondrial antibody test is negative. A liver biopsy is performed and microscopic examination reveals increased copper deposition. Which of the following ocular findings is most likely to be present in this woman?

- a) Macular degeneration
- b) Proliferative retinopathy
- c) Crystalline lens cataract formation
- d) Corneal Kayser-Fleischer rings
- e) Canal of Schlemm occlusion

Wilson's disease

- 6) A 28-year-old man with recent onset of a major depressive disorder ingests an entire bottle (100 capsules, 500 mg each) of a medication containing acetaminophen. He becomes progressively obtunded over the next 8 hours. Which of the following microscopic findings is most likely to be present in his liver 3 days following this ingestion?
- a) Normal histology
 - b) Extensive necrosis
 - c) Bridging fibrosis
 - d) Severe steatosis
 - e) Portal chronic inflammation
- 7) In the above scenarios the patient was taken to the emergency department. If you are on duty ER doctor which of the following would you administer to this patient?
- a) N-acetylcysteine
 - b) Acetylcholine
 - c) Atropine
 - d) Pralidoxime
 - e) Flumazenil
- 8) A 54-year-old Asian man has had malaise with a 6 kg weight loss over the past 7 months. On physical examination he has a firm, nodular liver edge. His stool is negative for occult blood. Laboratory studies show a positive serology for hepatitis B surface antigen, but negative serologies for hepatitis B surface antibody, hepatitis A IgM antibody, and hepatitis C antibody. His serum alpha-fetoprotein is 109 ng/mL. Which of the following neoplasms is he most likely to have?
- a) Hemangioma
 - b) Hepatic angiosarcoma
 - c) Cholangiocarcinoma
 - d) Hepatocellular carcinoma
 - e) Non-Hodgkin lymphoma
- 9) A patient diagnosed with an active Hepatitis virus infection is undergoing antiviral therapy. He has progressively developed symptoms of Diabetes Mellitus. A biopsy for fibrosis scoring shows development of steatosis. He is most likely to be infected by which of the following?
- a) Hepatitis C virus Genotype 3
 - b) Hepatitis B virus
 - c) Hepatitis B virus

- d) Non A Non B Hepatitis virus
- e) Hepatitis C virus Genotype 2

10) Which of the following combinations is incorrect?

- a) Rhodamine stain for copper
- b) Orcein stain for copper-associated protein
- c) Fontana - Masson stain for cirrhosis
- d) PAS - D for α 1-Antitrypsin deficiency
- e) Masson trichrome stain for fibrosis

11) A 45y/F had a head trauma after which she develops the complaints of excretion of large volumes of dilute urine with an inappropriately low specific gravity. Serum sodium and osmolality are increased as a result of excessive renal loss of free water, resulting in thirst and polydipsia. Which of the following disease explains this condition?

- a) Diabetes insipidus
- b) Diabetes mellitus
- c) Pituitary adenoma
- d) Prolactinoma
- e) Waterhouse friderichsen syndrome

12) A 22y M presents to medical OPD with complaints of high blood pressure, tightness of ring in his ring finger & joints pain. On examination skin thickening is noted with frontal bossing. On hormonal assay growth levels are elevated. What is your favorable diagnosis?

- a) Dwarfism
- b) Cretinism
- c) Acromegaly
- d) obesity
- e) sheehans syndrome

13) A disease of adrenal gland causing excess production of hormone named aldosterone. Another name for this is primary hyperaldosteronism also known as....

- a) Cushing syndrome
- b) Cushing disease
- c) Addisons disease
- d) Conn's syndrome
- e) Sheehan syndrome

14) Which of the following hormone is secreted from posterior lobe of pituitary?

- a) Throid stimulating hormone

- b) Oxytocin
 - c) Adrenocorticotrophic hormone
 - d) Follicular stimulating hormone
 - e) Lutenising hormone
- 15) A girl presents with delayed puberty, absent secondary sexual characteristics, and primary amenorrhea. She also appears to be hypertensive and hypokalemia. Which of the following enzymes is increased if there is virilization of a person?
- a) 11beta Hydroxylase
 - b) 17alpha hydroxylase
 - c) 21 beta hydroxylase
 - d) Pyruvate kinase
 - e) Alcohol dehydrogenase
- 16) Which of the following thyroid cancer is associated with MEN II syndrome?
- a) Papillary thyroid carcinoma
 - b) Medullary thyroid cancer
 - c) Follicular thyroid carcinoma
 - d) Anaplastic thyroid carcinoma
 - e) Thyroid lymphoma
- 17) In which of the following pairs, the hormone of endocrine glands and its primary action is mismatched.
- a) Calcitonin-lower blood calcium level
 - b) Parathyroid-raises blood calcium level
 - c) Somatostatin-inhibits release of glucagon
 - d) Insulin-increases blood glucose level
 - e) Glucagon-increases blood glucose level
- 18) Which of the following statement is true about pheochromocytoma?
- a) 50% extra adrenal
 - b) 45% bilateral
 - c) 10% are biological malignant
 - d) 10% associated with hypertension
 - e) Do not show Zell ballen arrangement
- 19) The prolactin inhibitory factor secreted by hypothalamus is???
- a) Throtropin releasing hormone
 - b) 5 hydroxytryptamine
 - c) Dopamine
 - d) Acetylcholine
 - e) Progesterone
- 20) In which of the following thyroid carcinoma, metastatic cervical lymphadenopathy may be 1st sign of disease:

- a) Papillary
- b) Follicular
- c) Anaplastic
- d) Medullary
- e) Lymphoma

21) A 54 year old female presented headache that worsens during night time associated with multiple episodes of tonic-clonic seizures. CT scan revealed a 6 cm mass in the Left cerebral hemisphere, On histological evaluation, geographical necrosis with Pseudo-palisading tumor cells were seen. The tumor was GFAP positive. What is the most likely diagnosis?

- a. Pituitary Adenoma
- b) Glioblastoma
- c. Medulloblastoma
- d. Pilocytic Astrocytoma
- e. Oligodendroglioma

22) A newborn develops fever, fits, neck rigidity and head retraction. The CSF examination show counts mostly neutrophils. The most likely organism present in CSF culture would be,

- a) Hemophilus influenza
- b) Nisseria meningitides
- c) Staphylococcus aureus
- d) Staphylococcusagalactiae
- e) E.coli

23) A 22-year-old man falls while driving a bike and strikes the left side of his head against a foot path. He is initially alert following this accident, but then became unconscious 45 minutes later. A head CT scan reveals a biconvex, lens-shaped area of hemorrhage centered over the left parietal region. What is your diagnosis on the base of above mentioned findings?

- a) Subdural hematoma
- b) Intraventricular hemorrhage
- c) Lacunar hemorrhage
- d) Epidural hematoma
- e) Subarachnoid hemorrhage

24) A 55 year old male presents with recurring headache and seizures. CT scan of patient revealed a space occupying lesion. Histopathology report revealed whorling clusters of cells with abundance of Psammoma bodies in the lesion. What will be your diagnosis?

- a) Meningioma
- b) Glioblastoma
- c. Medulloblastoma
- d. Pilocytic Astrocytoma
- e. Oligodendroglioma

25) Which of the following brain herniation is the most lethal & life threatening?

- a) Subfalcine herniation
- b) Tonsillar herniation
- c) Transtentorial herniation
- d) Transfalcine herniation
- e) Suprasagittal herniation

26) A 4 year old boy presents to the Outpatient department with complaint of unilateral headache that affects his sleep. CT scan without contrast reveals a well circumscribed neoplasm in the posterior cranial fossa showing cystic neoplasm with mural nodule. Microscopic examination revealed Rosenthal fibers. What is the most likely diagnosis?

- a. Pituitary Adenoma
- b. Glioblastoma
- c. Medulloblastoma
- d. Pilocytic Astrocytoma
- e. Oligodendroglioma

27) Neurofibrillary tangles are seen in which of the following disease?

- a) Parkinson's disease
- b) Dementia
- c) Lewy body Dementia
- d) Alzheimer disease
- e) Multiple sclerosis

28) A 32-year-old woman has noted tingling sensations of her hands & feet. She has difficulty controlling her hand movements, and the writing is nearly illegible. On examination she has decreased strength in her right upper extremity and decreased light touch sensation over her left lower extremity. CSF examination revealed elevated levels of IgG and oligoclonal bands on gel electrophoresis. Which of the following pathologic findings in the CNS is she most likely to have?

- a) Loss of pigmented neurons in the substantia nigra

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- b) Perivascular lymphocytes with demyelinated axons in white matter
- c) Increased neurofibrillary tangles and neuritic plaques in the neocortex
- d) Periventricular lymphoid aggregates with cells marking with CD19
- e) Foci of multinucleated cells and macrophages in grey and white matter

29) Pseudorosettes are the characteristic microscopic feature of which of the following

- a) Oligodendroglioma
- b) Glioblastoma
- c) Ependymoma
- d) Meningioma
- e) Metastatic carcinoma

30) Diffuse astrocytoma is which of the following grades

- a) WHO GRADE I
- b) WHO GRADE II
- c) WHO GRADE III
- d) WHO GRADE IV
- e) WHO GRADE V