

Class 5 2024

1. A 10-month-old infant has been brought to the clinic by mother with complaints of watery diarrhea for the past 24 hours. Additional to the diarrhea child also had fever and vomiting for the last two days. The patient's body temperature did not exceed 101.8F. In the last six hours there has been no vomiting, but diarrhea is getting worse with increased frequency and amount. The stool did not contain any mucus or blood. Medical history shows that the child completed a course of amoxicillin yesterday for otitis media. The child has also been introduced to milk and more spicy foods. History also shows that several children in day care had very similar symptoms. Examination of the skin is normal except for irritation around anal canal. There are no enlarged lymph nodes, respiration rate and pulse are normal. Otoscopic examination of both ears is normal. Lung and heart examination is normal. Abdominal examination reveals hyperactive peristaltic sounds. There are no silent zones. Abdomen is tender to palpation and slightly distended. Rebound tenderness and Rovsing tests are negative. The liver and spleen are normal sizes. What is the most likely cause of this patient's diarrhea?
 - A. Lactose intolerance
 - B. Antibiotic induced diarrhea
 - C. Bacterial gastroenteritis
 - D. Viral gastroenteritis
 - E. Giardia lamblia infection

1. What is the most likely causative organism for this child diarrhea

2. A 30-year-old male patient presents with gradually worsening shortness of breath, progressive exercise intolerance, orthopnea, fatigue, peripheral edema. Patient also has had few episodes of unexplained syncope. During auscultation of the heart there is a systolic ejection-type murmur that does not radiate to the neck. This murmur is heard best at the left sternal edge in the 3rd or 4th intercostal space. What is the most likely diagnosis

Hypertrophic Cardiomyopathy

3. A 30-year-old male patient presents with dyspnea, fatigue, and peripheral edema. Blood work shows elevated natriuretic peptides. Which of the following is the most likely diagnosis?

Dilated cardiomyopathy

4. A 30-year-old male patient presents with fatigue, exertional dyspnea, orthopnea, paroxysmal nocturnal dyspnea, and peripheral edema. Physical examination detects a quiet precordium, a low-volume and rapid carotid pulse, pulmonary crackles, and pronounced neck vein distention with a rapid y descent. A 3rd and/or 4th heart sound (S3, S4) are present. What is the most likely diagnosis?

Restrictive cardiomyopathy and diff dg is Cardiac tamponade

5. A female patient with asthenic body habitus, low body weight and straight-back syndrome presents with recently occurring anxiety and fatigue. On auscultation there is middle-to-late systolic click followed by high pitched mid-to-late systolic murmur.

Mitral valve prolapse

6. Patient presents for yearly examination. During heart auscultation there is a high-pitched, "diamond shaped" crescendo-decrescendo, midsystolic ejection murmur heard best at the right upper sternal border radiating to the neck and carotid arteries. What is the most likely cause

Aortic stenosis

7. Patient presents with high systolic pressure and low diastolic pressure. On heart auscultation there is soft S1, high-frequency decrescendo diastolic murmur best heard at the 3rd or 4th intercostal space at the left sternal border, diminished S1, soft S2. This is best heard with the patient sitting up or leaning forward and with deep expiration.

Aortic insufficiency

8. A male patient presents with petechias, purpuras in skin or mucous membranes. Laboratory values show Normal: BT (Bleeding time) PC (platelet count), PTT, PT. What is the most likely cause of these patients' symptoms?

Blood vessel damage

Ehlers-Danlos syndrome, osteogenesis imperfecta, Marfan syndrome, **scurvy** or of immunoglobulin A-associated vasculitis, a hypersensitivity vasculitis

9. A male patient presents with petechia, purpura, Prolonged BT, normal PT, PTT. Which is the most likely cause of this presentation?

Thrombocytopenia or platelet dysfunction

10. A 35-year-old woman presents with insidious onset of easy bruising, bleeding into skin and mucous membranes. Examination reveals petechia, purpura, ecchymoses, frequent bleeding from nose, excessive menstrual flow. What is the most likely cause?

Autoantibodies against the platelets
Idiopathic thrombocytopenic purpura

11. Patient taking Quinine, Quinidine, Penicillin',
Thiazide diuretics, Methyldopa, Heparin
Carbamazepine, Chlorpropamide, Glycoprotein
IIb/IIIa inhibitors (abciximab, eptifibatide, tirofiban),
Rifampin, Trimethoprim/sulfamethoxazole,
Vancomycin presents with easy bruising, purpura,
petechiae

Drug induced thrombocytopenia

12. A 35-year-old patient with confirmed HIV infection presents with frequent nose bleeds. What is the most likely cause of these patients nose bleeds?

HIV-induced thrombocytopenia

13. Female patient presents fever, pallor and jaundice, easy nose bleeds and alteration in level of consciousness. Examination reveals petechia, purpura, yellow sclera, sensory deficits in extremities. What is the most likely cause:

TTP (Thrombotic thrombocytopenic purpura)

14. 10-year-old children presented with fever, pallor, jaundice, frequent nose bleeds and decreased urine production. Blood work shows uremia,

thrombocytopenia, microangiopathic hemolytic anemia, renal failure.

HUS (Hemolytic uremic syndrome)

15. A 45-year-old patient presents with facial pressure and pain. Headache gets worse leaning forward. What is the most likely problem.

Sinusitis

16. Which of the following correctly matches sinus headache with symptoms?
- a. Maxillary sinusitis causes pain in the maxillary area, toothache, and frontal headache.
 - b. Frontal sinusitis causes pain in the frontal area and frontal headache.
 - c. Ethmoid sinusitis causes pain behind and between the eyes, a frontal headache often described as splitting, periorbital cellulitis, and tearing.
 - d. Sphenoid sinusitis causes less well localized pain referred to the frontal or occipital area

e. All of the above

- 17.** Patient presents with nasal congestion, watery rhinorrhea, eye itching, eye redness, sneezing. What is the most likely cause

Allergic rhinitis

18. A child presents with sore throat, difficulty swallowing. Child refuses to eat or drink. There is fever, malaise, and GI upset. Observation shows redness of throat, tonsillar discharge, swelling of tonsils, petechia on tonsils, throat and soft palate. Neck palpation reveals tender/enlarged cervical lymph nodes

Bacterial pharyngitis

19. A 20-year-old patient presents with voice change, decreased volume and hoarseness. What is the most likely cause

Laryngitis

20. Child presents with high fever, drooling, poor eye contact and inspiratory stridor. Child appears cyanotic with tachypnea. Child sits upright and leans forward with hyperextended neck, lower jaw thrust forward and open mouth. Sore throat, dysphagia, that developed abruptly.

Epiglottitis

21. A 35-year-old male patient presents with history of mild fever and sore throat for 3 days. The patient has developed slight dyspnea, nonproductive cough and chest pain with stiffness, Physical examination is normal except for scattered rhonchi and wheezing bilaterally. What is the most likely cause?

Acute bronchitis

22. A 65-year-old male with over 30-year history of smoking presents with three-year history of productive cough with purulent mucus.

Chronic bronchitis

23. A 65-year-old male with over 30-year history of smoking presents with dyspnea, cough, wheezing, barrel chest, breathing through pursed lips, no cyanosis (pink puffers), sits forward. What is the most likely cause?

Emphysema

24. A 65-year-old male patient with history of chronic bronchitis presents with severe, persistent cough, with copious foul-smelling sputum, in the morning full mouth of sputum, dyspnea, fatigue, bilateral chest pain. What is the most likely cause?

Bronchiectasis

25. A 30-year-old male patient presents with abrupt onset of spiking fever with chills, dyspnea and tachypnea. Productive cough with rusty sputum, pleuritic chest pain, Patient also has weakness, fatigue, malaise, nausea, vomiting, diarrhea. What is the most likely cause?

Pneumonia

Streptococcus pneumonia (Pneumococcus)

26. A 20-year-old male patient presents with sudden onset of fever, cough, foul smelling purulent sputum, localized chest pain, weight loss, weakness, fatigue

Lung abscess

27. A 5-year-old child presents with sudden dyspnea and cough. Child was playing with peanuts. You suspect that symptoms are caused by aspiration of peanut. During auscultation there are no breath sounds over the right middle lung area, percussion shows dull sound over the same area. What is the most likely cause of dyspnea.

Atelectasis

28. A 5-year-old child with three-day history of flu presents with profound dyspnea, tachypnea, cyanosis, hypoxemia. During examination patient's RR is 40/min, and patient uses accessory breathing muscles? What has developed in this child?

ARDS (acute respiratory distress syndrome)

29. A 40-year-old male patient presents with extreme dyspnea, restlessness, and anxiety with a sense of suffocation. During observation the patient appears pale, cyanotic and with froth at the mouth. Further evaluation shows rapid and low volume pulse, changing blood pressure, lung auscultation shows inspiratory fine crackles that are widely dispersed anteriorly and posteriorly over both lung fields. What is the most likely cause of this presentation?

Pulmonary edema

30. A 65-year-old male patient with over 30-year history of smoking presents with unexplained dyspnea, cough, weight loss, and chest pain

Lung cancer

31. A 30-year-old female patient who was diagnosed with COVID -19 presents with dyspnea, hemoptysis, pleuritic chest pain, lightheadedness, presyncope. There is tachypnea, tachycardia, and hypotension.

Pulmonary embolism/infarction

32. Patient presents with dyspnea, cough, chest discomfort, and crackles. Fatigue, malaise, weakness, anorexia, weight loss, and low-grade fever are also presents. Examination reveals enlarged lymph nodes, spleen, multiple nodular skin lesions. Biopsy of skin lesions shows noncaseating granulomas. CT scan of lungs shows small nodules.

Sarcoidosis

33. A 40-year-old female patient presents with complaint of exertional dyspnea and non-productive cough for last 6 month. Auscultation of both lung fields reveals fine dry inspiratory (Velcro) crackles. What is the most likely cause

Idiopathic Pulmonary fibrosis

34. A 20-year-old male patient after acupuncture treatment complains of dyspnea, and pleuritic chest pain. Physical examination shows absent fremitus on palpation, hyperresonance sound on percussion, absent breath sounds on auscultation over the left lung. Tracheal shift to the right. What is the cause

Pneumothorax

35. 30-year-old patient with chest pain, slowly progressive dysphagia for solids and liquids, regurgitation of undigested food, nocturnal regurgitation and pronounced weight loss

Achalasia

Dg: Barium swallow (X-ray), endoscopy

Tx; dilation, botulinum toxin, surgical myotomy

36. Patient presents with dysphagia. Examination reveals esophageal webs, smooth tongue and blood work shows low iron and ferritin. What is the most likely cause

Plummer-Vinson syndrome

37. Patient is complaining of chest pain and dysphagia. Endoscopy revealed no-propulsive diffuse contraction of the esophagus. What is the causes of dysphagia?

Diffuse esophageal spasms. (Corkscrew esophagus)

38. What is the most common cause of the GERD?

Hiatal hernia

39. Patient presents with heartburn, dysphagia, regurgitation of sour brash, hematemesis
GERD

If untreated what can develop in this patient esophagus? Barret esophagus = metaplasia

40. A 45 year old male patient with 10 year history of HIV confirmed infection presents to your office with complaint of odynophagia (painful swallowing) and chest pain.

Infectious esophagitis

41. Infant or child that presents with food refusal, vomiting, weight loss, chest pain and dysphagia. Blood work shows marked eosinophilia. Can mimic reflux disease (heartburn)

Eosinophilic esophagitis

42. A 55-year-old male smoker that uses alcohol on social occasions presents with unexplained dysphagia, weight loss
Esophageal cancer

43. Patient presents with dyspepsia (sensation of pain or discomfort in the upper abdomen – gassiness, indigestion, early satiety, postprandial fullness, burning), bleeding – hematemesis (bloody vomit), melena (dark tarry stool). Eating food makes symptoms worse.

Gastritis (Acute hemorrhagic gastritis)

