

# Block 'O'

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1. A 55-year-old male presents to the emergency department with chest pain that started suddenly while he was walking in cold weather. He describes the pain as a squeezing and burning sensation in the center of his chest. It was relieved within 5 minutes after he stopped walking. He has a history of hypertension and hyperlipidemia. Based on the characteristics of the chest pain, which of the following is the most likely diagnosis?

- a. Decubitus angina      b. Musculoskeletal chest pain      c. Myocardial ischemia      d. Pericarditis      e. Pleurisy

2. A 40-year-old female presents to the clinic with a sharp chest pain that worsens when she takes a deep breath or coughs. The pain is localized to the left side of her chest and does not radiate. She recently recovered from a viral respiratory infection. On examination, she has a normal heart rate and no significant findings on auscultation. Based on the characteristics of the chest pain, which of the following is the most likely diagnosis?

- a. Angina pectoris      b. Musculoskeletal chest pain      c. Myocardial ischemia      d. Myocarditis      e. Pleurisy

3. A 41-year-old male presents to the emergency department with chest pain and difficulty in breathing. He reports that the pain started suddenly after a heated argument with his colleague. The pain is accompanied by throat tightness and a tingling sensation around his mouth. His vitals are stable, and there are no signs of hypoxemia. Which of the following is the most likely diagnosis?

- a. Anxiety and Hyperventilation Syndrome      b. Panic attack with anxiety-induced chest pain  
c. Da Costa's syndrome      d. Pulmonary embolism

4. A 60-year-old female presents to the emergency department with sudden onset of dyspnea and chest pain. She is hypotensive and tachycardic. You suspect a massive pulmonary embolism (PE). Which of the following is the most appropriate initial step in management to confirm the diagnosis and guide treatment?

- a. Administer thrombolytic therapy without further imaging      b. Transthoracic echocardiogram to assess for right heart strain  
c. Order a CT pulmonary angiography immediately      d. Perform a D-dimer test to rule out PE  
e. Perform a V/Q scan to assess for PE

5. An 80-year-old woman with a history of chronic exertional dyspnea and a dry cough presents to the outpatient clinic. On examination, she has notable supraclavicular lymphadenopathy and bilateral parotid gland enlargement. Chest X-ray demonstrates bilateral hilar lymphadenopathy and diffuse pulmonary infiltrates. Her laboratory results include serum calcium of 13 mg/dL, total leukocyte count (TLC) of 7800/cubic mm with lymphocytes at 15%, and an elevated serum angiotensin-converting enzyme (ACE) level.

Given her clinical presentation, which of the following diagnostic tests would most likely confirm the diagnosis?

- a. Bronchoscopy with biopsy      b. Serum vitamin D level      c. Bone marrow biopsy  
d. Sputum acid-fast bacilli (AFB) smear      e. CT scan of the CHEST

6. A 50-year-old male, previously treated for tuberculosis, presents with a 6-month history of fatigue, unintentional weight loss, and occasional hemoptysis. He denies fever or significant respiratory distress. A chest CT reveals a cavitary lesion with a mobile mass inside. Sputum microscopy shows scanty hyphal fragments, and culture grows *Aspergillus fumigatus*. Serum IgG against *A. fumigatus* is elevated. Which of the following is the most likely diagnosis?

- a. Invasive pulmonary aspergillosis      b. Chronic necrotizing aspergillosis      c. Simple aspergilloma  
d. Allergic bronchopulmonary aspergillosis (ABPA)      e. Tuberculous cavity with secondary bacterial infection

7. A 65-year-old male, long-term smoker, presents with worsening fatigue, muscle weakness, and unsteady gait over the past 3 months. On examination, he has proximal muscle weakness, difficulty rising from a seated position, and absent deep tendon reflexes in the lower limbs. His gait is broad-based, and he exhibits slight digital clubbing. Blood tests reveal hyponatremia (serum sodium 123 mmol/L) with low serum osmolality, and a chest X-ray shows a mass in the right upper lobe. Which of the following paraneoplastic syndromes is most likely contributing to his presentation?

- a. Lambert-Eaton myasthenic syndrome and syndrome of inappropriate antidiuretic hormone secretion (SIADH)  
b. Hypercalcemia due to parathyroid hormone-related peptide secretion and cerebellar degeneration  
c. Carcinoid syndrome and polyneuropathy  
d. Ectopic adrenocorticotrophic hormone secretion and hypertrophic pulmonary osteoarthropathy  
e. Polymyositis and nephrotic syndrome

8. A 55-year-old male with no significant smoking history presents with a 6-month history of progressive breathlessness and a dry, persistent cough. On examination, bilateral basal crackles are heard, and digital clubbing is noted. A chest X-ray reveals reduced lung volumes and reticulonodular shadowing. Pulmonary function tests show a restrictive ventilatory defect. Which of the following additional findings would be most consistent with a diagnosis of diffuse parenchymal lung disease at an advanced stage?

- a. Central cyanosis and signs of right ventricular failure  
b. Central cyanosis with decreased expiratory breath sounds and hyperinflation on imaging  
c. Large lung volumes and obstructive ventilatory defect on pulmonary function tests  
d. Peripheral cyanosis with normal high-resolution computed tomography (HRCT) findings  
e. Unilateral crackles and patchy consolidation on chest X-ray



9. A 62-year-old male with a 45-year history of smoking presents with fatigue, significant weight loss, and persistent bone pain, particularly lower legs. He also reports recent episodes of headaches, occasional confusion, and new onset seizures. Physical examination reveals finger clubbing, tenderness over the anterior shin, and mild pitting edema. X-rays of the tibia and fibula show subperiosteal new bone formation. A brain MRI shows multiple small lesions, and a CT scan of the chest reveals a right upper lobe mass. Which of the following best explains the patient's clinical presentation?

- a. Hypertrophic pulmonary osteoarthropathy (HPOA) and metastatic brain disease
- b. Finger clubbing and paraneoplastic syndrome with cerebellar degeneration
- c. Epilepsy secondary to metastatic brain lesions and paraneoplastic myelopathy
- d. Metastatic liver disease causing seizures and bone pain
- e. Hypercalcemia and digital clubbing associated with parathyroid hormone-related peptide secretion

10. A 30-year-old previously healthy woman presents with a 2-week history of fever, night sweats, and a dry cough. She reports recent weight loss and fatigue. On examination, she has hepatosplenomegaly and normal breath sounds on auscultation. Fundoscopic examination reveals choroidal tubercles. A chest X-ray shows multiple small nodular lesions scattered throughout both lung fields. Blood tests reveal anemia and leucopenia. Which of the following best describes her likely diagnosis?

- a. Primary pulmonary tuberculosis with hypersensitivity reaction
- b. Miliary tuberculosis with possible tuberculous meningitis
- c. Post-primary pulmonary tuberculosis with apical cavitary lesions
- d. Latent tuberculosis infection with acute progression
- e. Extrapulmonary tuberculosis with isolated bone marrow involvement

11. A 57-year-old man presents with a persistent cough for the past 6 weeks, weight loss, night sweats, and low-grade fever. He lives in an area with a high prevalence of tuberculosis (TB). A chest X-ray shows bilateral upper lobe cavitary lesions. Sputum smear microscopy, using the Ziehl-Neelsen stain, is negative for acid-fast bacilli. The patient has a significant history of smoking but no recent travel or known exposure to TB. Which of the following is the most appropriate next step in the diagnostic workup?

- a. Initiate empirical anti-TB therapy based on clinical suspicion
- b. Perform a bronchoscopy with lavage to obtain more diagnostic material
- c. Order a rapid molecular test such as Cepheid GeneXpert MTB/RIF
- d. Wait for sputum culture results before starting any treatment
- e. Use light-emitting diode fluorescent microscopy with auramine staining for immediate diagnosis

12. A 28-year-old woman with tuberculosis (TB) begins treatment with rifampicin, isoniazid, ethambutol, and pyrazinamide. She observes that her urine and tears have turned orange/red and is concerned about interactions with her oral hypoglycemic medication for type 2 diabetes. She is also planning a pregnancy and asks about the safety of TB medications during this time. Which of the following statements best addresses her concerns?

- a. Rifampicin causes orange/red body fluid discoloration minimally affects oral hypoglycemics; ethambutol needs no renal dose adjustments.
- b. Rifampicin causes orange/red body fluid discoloration and accelerates oral hypoglycemic metabolism, requiring dose adjustments, ethambutol requires caution in renal impairment.
- c. Rifampicin causes orange/red body fluid discoloration, does not alter oral hypoglycemic efficacy; ethambutol does not require renal adjustments, and no additional monitoring is needed.
- d. Ethambutol should be avoided in renal impairment; rifampicin has minimal impact on oral hypoglycemics and does not require contraceptive adjustments.
- e. Rifampicin causes orange/red body fluid discoloration and does not affect oral hypoglycemics or require additional monitoring.

13. A 55-year-old male smoker presents with a persistent cough, breathlessness, ankle swelling, and occasional morning headaches. He describes his cough as a "smoker's cough," and his physical examination shows quiet breath sounds but no finger clubbing. Based on this presentation Which diagnosis is most likely given the combination of symptoms and clinical findings?

- a. Chronic bronchitis with secondary pulmonary hypertension due to smoking-related damage.
- b. Asthma exacerbated by smoking, with symptoms of oedema & morning headaches suggesting a possible alternative diagnosis.
- c. Chronic obstructive pulmonary disease (COPD) with potential complications such as Cor pulmonale and exacerbation-related symptoms requiring further evaluation for tuberculosis.
- d. Bronchiectasis with secondary symptoms of morning headaches and ankle swelling not typically associated with COPD.
- e. Congestive heart failure exacerbated by smoking, with symptoms (breathlessness & ankle swelling misattributed to COPD).

14. In evaluating the severity and impact of Chronic Obstructive Pulmonary Disease (COPD), using FEV1% predicted is traditional. However, a more detailed assessment considers various factors. Given the following options which method provides a more complete evaluation of COPD severity, taking into account both objective measures and patient experiences?

- a. Combining FEV1% predicted with the Modified Medical Research Council (mMRC) dyspnea scale, and noting activity limitations and exacerbation frequency.
- b. Relying on FEV1% predicted and imaging results while ignoring patient symptoms and functional limitations.
- c. Relying only on patient-reported symptoms and exacerbation history without considering FEV1% predicted.
- d. Using FEV1% predicted alone to determine severity and guide treatment.
- e. Using FEV1% predicted and the frequency of exacerbations without considering patient-reported symptoms.



## BLOCK 'O'

A 45-year-old male presents with complaints of excessive daytime sleepiness, difficulty concentrating, and frequent headaches in the morning. His spouse reports that he snores loudly in all sleeping positions and experiences episodes of gasping and choking during sleep, often followed by pauses in breathing. The patient denies a history of heart disease but is concerned about his decreased cognitive function and work performance. He has also noticed nocturia. Which of the following is the most important next step in the management of this patient?

- a. Advise weight loss and lifestyle modifications without further investigation
- b. Perform a brain MRI to rule out central nervous system causes of excessive sleepiness
- c. Prescribe a short course of benzodiazepines to improve sleep quality
- d. Refer for overnight sleep study to assess breathing patterns and sleep quality
- e. Start a trial of continuous positive airway pressure (CPAP) therapy

16. A 55-year-old male presents with a 10-year history of chronic daily cough producing copious amounts of purulent sputum, sometimes streaked with blood. He reports recurrent respiratory infections, pleuritic chest pain during exacerbations, and increasing breathlessness on exertion. He has lost weight unintentionally over the past 6 months and experiences significant fatigue and anorexia. Examination reveals crackles over the lung bases and halitosis. Given his presentation, which of the following complications is he most at risk for if his condition is left untreated?

- a. Cor pulmonale
- b. Lung abscess
- c. Massive hemoptysis
- d. Pneumothorax
- e. Pulmonary hypertension

17. A 72-year-old male with advanced chronic obstructive pulmonary disease (COPD) presents to the emergency department with severe dyspnea, drowsiness, and confusion. On examination, he has warm peripheries, bounding pulses, a flapping tremor, and evidence of hyperinflation with intercostal indrawing. Arterial blood gas (ABG) reveals pH 7.28, PaCO<sub>2</sub> 75 mmHg, and PaO<sub>2</sub> 50 mmHg. After initial supplemental oxygen therapy, he remains drowsy, with low respiratory effort. What is the next best step in managing this patient?

- a. Administer a high-dose diuretic and monitor response
- b. Administer bronchodilators and corticosteroids, then reassess
- c. Continue high-flow oxygen until PaO<sub>2</sub> improves
- d. Immediate intubation and mechanical ventilation
- e. Non-invasive ventilation (NIV)

18. A 30-year-old woman presents with episodic shortness of breath, wheezing, and a dry cough, especially at night and after exercise. She has no history of smoking or other significant comorbidities. Her spirometry reveals an FEV<sub>1</sub> of 1.8 L before a bronchodilator and 2.2 L after administration. To confirm the diagnosis of asthma, which of the following additional findings would provide the most definitive evidence?

- a. A 10% improvement in FEV<sub>1</sub> after administration of a bronchodilator
- b. A decrease in FEV<sub>1</sub> of 10% after 6 minutes of exercise
- c. FEV<sub>1</sub> increase of 15% and 400 mL after bronchodilator administration
- d. No change in FEV<sub>1</sub> post-bronchodilator but symptomatic improvement
- e. PEF diary showing 10% diurnal variation over 2 weeks

19. A 28-year-old pregnant woman with a history of poorly controlled asthma presents for prenatal care. She reports frequent exacerbations despite adherence to her asthma medications. Which of the following maternal and fetal complications is she at the highest risk for if her asthma remains uncontrolled throughout her pregnancy?

- a. Enhanced risk of pre-eclampsia and intrauterine growth restriction
- b. Greater risk of maternal anemia and neonatal sepsis
- c. Higher likelihood of postnatal depression and neonatal jaundice
- d. Increased incidence of multiple pregnancies and congenital malformations
- e. Increased risk of gestational diabetes and preterm labor

20. A 45-year-old patient with severe asthma has been prescribed oral prednisolone for the past 6 months to manage symptoms. To address the potential long-term side effects associated with prolonged glucocorticoid use, which of the following is the most suitable management strategy?

- a. Consider biologic therapies such as benralizumab, mepolizumab, or dupilumab for eosinophilic asthma
- b. Increase the oral glucocorticoid dose to enhance symptom control
- c. Initiate biologic therapy such as omalizumab for IgE-driven atopic asthma
- d. Prescribe bisphosphonates to mitigate the risk of osteoporosis
- e. Refer the patient for a specialist severe asthma assessment

21. A 65-year-old male presents with retrosternal oppression, hypotension, oliguria, and raised jugular venous pressure. On examination, heart sounds are quieter, and there is no audible friction rub. These findings suggest a large pericardial effusion. What additional clinical sign would be most indicative of cardiac tamponade?

- a. Corrigan's pulse
- b. Duroziez's sign
- c. Kussmaul's sign
- d. Pulsus paradoxus



22. A 60-year-old male with a history of metastatic lung cancer presents with progressive dyspnea, chest discomfort, and fatigue. On examination, he is hypotensive, tachycardic, and has a raised jugular venous pressure with distant heart sounds. An ECG shows low-voltage QRS complexes and electrical alternans. Echocardiography confirms a large pericardial effusion with diastolic collapse of the right atrium, consistent with cardiac tamponade. Despite fluid resuscitation, his blood pressure remains low. What is the most appropriate next step in his management?

- a. Emergency percutaneous pericardiocentesis
- b. High-dose corticosteroids for inflammatory control
- c. Immediate intravenous inotropes and observation
- d. Surgical pericardial window due to underlying malignancy

23. A 68-year-old female with chronic heart failure presents with sudden-onset shortness of breath and chest pain. She has a history of atrial fibrillation and is currently on anticoagulant therapy. Physical examination reveals unilateral leg swelling and warmth. What is the most likely explanation for her symptoms?

- a. Acute pulmonary embolism resulting from a deep vein thrombosis
- b. Atrial fibrillation leading to thromboembolism and acute myocardial infarction
- c. Acute exacerbation of heart failure causing right-sided heart strain and peripheral edema
- d. Fluid overload from heart failure exacerbated by inappropriate diuretic use

24. A 64-year-old patient with advanced heart failure (NYHA class III) and atrial fibrillation is being managed to improve symptoms and prevent hospitalization. The patient is currently on diuretics and ACE inhibitors. Considering the addition of digoxin or amiodarone to the treatment regimen, which of the following statements accurately reflects the clinical role of these medications?

- a. Amiodarone can improve long-term survival in heart failure patients by controlling atrial fibrillation
- b. Amiodarone should be used as the first-line therapy for rate control in heart failure patients with atrial fibrillation
- c. Digoxin can provide rate control and reduce hospitalization rates in heart failure patients with atrial fibrillation, but does not improve long-term survival
- d. Digoxin improves both symptoms and long-term survival in heart failure patients with atrial fibrillation

25. A 70-year-old patient with paroxysmal atrial fibrillation and a CHA<sub>2</sub>DS<sub>2</sub>-VASc score of 3 is evaluated for stroke prevention. Which of the following best describes the current recommendations for anticoagulant therapy in this patient?

- a. DOACs like rivaroxaban and apixaban are preferred over warfarin for their ease of use and lower risk of interactions.
- b. DOACs have a higher bleeding risk compared to warfarin, especially in patients with peptic ulcer disease.
- c. Warfarin is the first-line treatment due to its long-term efficacy and ability to be reversed with vitamin K.
- d. Idarucizumab and andexanet alfa are used to reverse the effects of warfarin in case of major bleeding.

26. A 62-year-old female with a history of systemic lupus erythematosus (SLE) presents with progressive fatigue, shortness of breath, and chest pain. Physical examination reveals a friction rub. Electrocardiography reveals diffuse ST-segment elevations. Which of the following cardiovascular complications is most likely related to her systemic disease?

- a. Aortic dissection
- b. Libman-Sacks endocarditis
- c. Myocardial infarction
- d. Pericarditis

27. A 65-year-old male is being investigated for suspected infective endocarditis after presenting with fever and a new murmur. Blood cultures are obtained, and echocardiography is performed. Which of the following is the most accurate diagnostic approach for confirming infective endocarditis?

- a. Collecting two sets of blood cultures from a central line at intervals of  $\geq 6$  hours
- b. Collecting three to six sets of blood cultures from peripheral sites at intervals of  $\geq 6$  hours
- c. Performing transthoracic echocardiography alone to detect vegetations
- d. Waiting for the patient to develop pyrexia before collecting blood cultures

28. A 62-year-old male with cardiogenic shock following an acute myocardial infarction (MI) is being considered for immediate percutaneous coronary intervention (PCI). During his initial assessment, it is noted that the myocardium surrounding the infarcted area is contracting poorly. This phenomenon, which indicates that the myocardium may eventually recover, is referred to as:

- a. Myocardial remodeling
- b. Myocardial stunning
- c. Myocardial hibernation
- d. Myocardial necrosis

29. A 54-year-old male presents with a history of chronic chest pain and an abnormal electrocardiogram showing changes. Imaging studies reveal a pattern of myocardial damage consistent with ischemia. Despite the absence of recent symptoms, these findings suggest a previously unrecognized myocardial infarction. Which of the following sets of criteria is most appropriate for diagnosis?

- a. Persistent ST-segment elevation, patho-anatomical findings of recent MI, and absence of non-ischemic causes
- b. Abnormal Q waves with/without symptoms, imaging evidence of loss of viable myocardium, & patho-anatomical findings of prior MI
- c. Elevated cardiac biomarkers, transient ST-segment changes, and evidence of recent ischemic events
- d. Normal Q waves, imaging evidence of acute myocardial damage, and clinical symptoms consistent with ischemia



30. A 65-year-old male with a history of chronic obstructive pulmonary disease (COPD) and hypertension presents to the emergency department with acute shortness of breath and chest discomfort. His vital signs show a blood pressure of 90/60 mmHg, heart rate of 110 beats per minute, and oxygen saturation of 85% on room air. An ECG shows sinus tachycardia without ST-segment changes. Laboratory tests reveal elevated plasma troponin levels. Which of the following conditions is least likely to be associated with the elevated troponin levels in this patient?
- Pulmonary embolus
  - Pulmonary oedema
  - Septic shock
  - Stable angina
31. A 65-year-old male patient with a history of stable angina is scheduled for coronary angiography. This procedure will selectively image the left and right coronary arteries to provide detailed information about the extent and severity of coronary stenoses, thrombus, and calcification. Which of the following additional assessments can be used during coronary angiography to more precisely define plaque characteristics and severity?
- Echocardiography and Doppler ultrasound
  - tomography
  - Magnetic resonance imaging and computed tomography
  - Intravascular ultrasound and optical coherence
  - Electrocardiography and Holter monitoring
32. A 25-year-old female presents to the emergency department with palpitations, dizziness, and shortness of breath. Her ECG shows a narrow QRS complex tachycardia with a heart rate of 180 beats per minute. She has a history of recurrent supraventricular tachycardia (SVT). After initial stabilization, she is diagnosed with Atrioventricular Nodal Re-entrant Tachycardia (AVNRT). Which of the following is the most appropriate long-term management strategy for this patient?
- Oral  $\beta$ -blocker therapy
  - Oral verapamil therapy
  - Catheter ablation
  - Implantable cardioverter-defibrillator (ICD)
33. A 60-year-old male with a history of ischemic heart disease presents to the emergency department with palpitations, chest pain, and dizziness. His blood pressure is 85/60 mmHg, and his ECG shows a wide QRS complex tachycardia at a rate of 160 beats per minute. Which of the following is the most appropriate initial management step for this patient?
- Correction of hypokalemia and hypomagnesaemia
  - Intravenous amiodarone bolus followed by continuous infusion
  - Synchronized DC cardioversion
  - Intravenous beta-blocker therapy
  - Intravenous lidocaine
34. A 60-year-old woman is admitted to the hospital after ingesting a large quantity of beta-blockers in a suicide attempt. She presents with severe bradycardia (heart rate of 30 bpm), hypotension (BP 80/50 mmHg), and signs of decreased consciousness. An ECG reveals a third-degree atrioventricular (AV) block. Which of the following is the most appropriate immediate management for this patient?
- Administer intravenous calcium gluconate
  - Administer intravenous glucagon
  - Initiate temporary transvenous cardiac pacing
  - Prepare for permanent pacemaker insertion
35. A 55-year-old male with a history of hypertension and hyperlipidemia presents to the clinic with chest discomfort. He describes the discomfort as a constricting sensation in the center of his chest that radiates to his neck and left arm. The discomfort occurs during his morning walks and is relieved within 5 minutes by rest. Which of the following features most strongly supports a diagnosis of typical angina?
- Discomfort is associated with palpitations and sweating exertion
  - Discomfort is not related to physical exertion
  - Discomfort is relieved by rest or glyceryl trinitrate (GTN) within 5 minutes
  - Discomfort is sharp and localized to the left side of the chest
  - Discomfort occurs at rest and lasts for more than 20 minutes
36. A 34-year-old male is brought to the emergency department after sustaining a GSW (Gunshot wound) to the right chest. Upon arrival, his HR (heart rate) is 125 and SBP (systolic blood pressure) is 80 mm of Hg. His trachea is deviated to the left and breath sounds on the right are absent. He is awake and agitated. Which of the following is the first step in management?
- Left-sided thoracotomy
  - Right-sided thoracotomy
  - CT scan of the chest and abdomen
  - Needle decompression of the right chest
  - Endotracheal intubation via direct laryngoscopy
37. Because of his involvement in a motor vehicle accident, a 25-year-old football player has a chest wall injury. The only abnormal findings on clinical and radiologic examination are a fracture of the right fifth to seventh ribs and a small haemothorax. What should treatment include?
- Insertion of an intercostal drain to avoid pneumothorax
  - Thoracotomy to treat a small haemothorax in the right base
  - Insertion of a metal plate to fix the fracture
  - Administration of analgesic medication
  - Administration of cortisone to prevent callus formation



38. An 20-year-old man presents to the emergency department with a gunshot wound to the left chest in the anterior axillary line in the 6<sup>th</sup> intercostal space. A rushing sound is audible during inspiration. Immediate management is which of the following?  
 a. Exploratory laparotomy      b. Exploratory thoracotomy      c. Closure of the hole with sterile dressing  
 d. Pleurocentesis      e. Insertion of chest tube
39. Tension pneumothorax and cardiac tamponade are examples of which of the following?  
 a. Cardiogenic shock      b. Distributive shock      c. Hemorrhagic shock      d. Obstructive shock      e. Neurogenic shock
40. A 50-year-old woman is involved in an MVC (motor vehicle collision) and strikes her chest on the steering wheel. Which of the following should be ordered initially to evaluate for blunt cardiac injury (BCI)?  
 a. Electrocardiogram (ECG)      b. CT angiogram of the aortic arch      c. Sestamibi scan of the heart  
 d. Chest x-ray      e. Dobutamine stress test
41. A two years old child is brought to ER with cyanosis and dyspnea of one hour duration. He had recurrent such episodes for the past half an year. O/E patient is deeply cyanosed, extremely irritable and tachypneic with finger clubbing. There is an ejection systolic murmur at pulmonary area. What is the most likely diagnosis?  
 a. Recurrent SVT (supraventricular tachycardia)  
 d. Ebstein anomaly      b. Aortic stenosis      c. Paroxysmal hyper cyanotic spells  
 e. Transposition of great arteries
42. A 05 years old with history of central cyanosis since birth has presented to emergency department with altered consciousness since morning. He has been unwell for the past 5 days. It started with low grade fever and headache on day 1 and next day he started vomiting which was followed by one episode of fit. Only symptomatic treatment was given. What is the most likely diagnosis?  
 a. Brain abscess      b. Tuberculous meningitis      c. Bacterial meningitis      d. Encephalitis      e. Stroke
43. An 18 months old presents to ER with tachypnea. He was alright till yesterday except for a mild upper respiratory tract infection that was going on for 3 days. But since morning however, he got sick and developed ashen color. Clinically he has unstable vitals, is restless, irritable and poor pulses. His liver is palpable 3 cm below costal margin and pedal edema is positive. What is the best specific treatment choice for this patient?  
 a. Verapamil      b. Adenosine      c. Synchronized DC cardioversion      d. B blocker      e. Ablation therapy
44. An infant 9 months old is brought to well-baby clinic for routine checkup. He seems to be thriving well, weighing 8.5 kgs. He is holding his head and can sit alone. Auscultation reveals a clear chest and a murmur is heard which is ejection systolic type on the left side of the upper chest. What is the most likely diagnosis?  
 a. VSD      b. ASD      c. PDA      d. Coarctation of aorta      e. Tetralogy of Fallot
45. A twelve month old has a history of hospitalization twice for lower respiratory tract infection. According to his mother he is also not gaining weight. Clinical examination reveals a pansystolic murmur at lower left sternal border. First heart sound is normal whereas loud second heart sound is heard in pulmonary area. There is no edema. Chest is clear bilaterally. Best treatment option for this case?  
 a. Diversify weaned foods  
 d. A follow up in 6 months      b. Start ACE inhibitors      c. Opt for a surgical intervention  
 e. No Intervention is needed as child will outgrow this problem
46. A 12 years old presents to OPD with off and on headache for the past year and a half. Headache is diffuse and is not associated with fever. There is also no history of loss of consciousness or fits. His mother is not satisfied with his food intake as well. He also often complains of pain in his legs for which a G.P prescribed him some calcium and vitamin D syrups. He often takes pain killers for his headache but shows no improvement. Clinically examination reveals; H/R 95/mts and R/R 18 /mts and b.p. of 150/85. Diagnosis is?  
 a. Migraine      b. Coarctation of aorta      c. Space occupying lesion of the brain      d. Stress headache      e. Arrhythmias
47. An eight-day neonate presents with cyanosis since birth. He was delivered full term SVD with immediate cry but develops cyanosis few hours after birth. Clinically he is tachypneic and precordium is showing increased left ventricular impulse and holosystolic murmur is audible along left sternal border. ECG done shows left axis deviation and left ventricular hypertrophy. Most likely diagnosis is?  
 a. Ebstein anomaly      b. Transposition of great arteries      c. Tricuspid atresia  
 d. Tetralogy of Fallot      e. Critical aortic stenosis
48. A full term newborn with cyanosis and severe respiratory distress is brought to ER. On precordium auscultation 2nd heart sound is single and loud and a soft systolic ejection murmur is heard. Echocardiography is done and confirms the diagnosis of transposition of great arteries. He is immediately given prostaglandin E 1 but shows minimal improvement. Next best step to do in this patient?  
 a. Shift to NICU and ventilate the patient      b. Immediately go for Rashkind balloon atrial septostomy  
 c. Arterial switch (Jantene) procedure      d. Mustard or Senning operation      e. No surgical intervention, just supportive care



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- An eight months old infant presents with three days history of upper respiratory tract infection. He was well before the onset of symptoms and never got sick. Since morning however he has developed severe respiratory distress. Clinically he has tachycardia, muffled heart sounds his pulses are weak and a third heart sound is also audible. His liver is also palpable. Most likely diagnosis?
- a. Acute Myocarditis  
b. Supraventricular tachycardia  
c. Atrial fibrillation  
d. Severe pneumonia with heart failure  
e. Cardiac tamponade
50. A 12 years old presents with off and on history of chest pain. He also complains often of getting tired quickly as he has to go on foot to school and takes many short breaks before reaching there. He is taking iron therapy as advised by a physician. His elder brother is also taking multivitamins and medications for some heart problem. Clinically his vitals are stable and auscultation of the heart reveals ejection systolic murmur at aortic region not associated with a click. What is the most likely diagnosis?
- a. Aortic stenosis  
b. Hypertrophic cardiomyopathy  
c. Coarctation of aorta  
d. Dilated cardiomyopathy  
e. Constrictive pericarditis (tuberculous)
51. A previously well 18 months old child presents to ER with 2 days history of cough and rhinorrhea for which he was given cough medications by mother. Now for the last few hours patient has developed high grade fever and is looking toxic with saliva drooling through the mouth. Child had been given OPV drops and vaccinated only at birth. What is the most likely diagnosis?
- a. Croup  
b. Epiglottitis  
c. Foreign body ingestion  
d. Tension Pneumothorax  
e. Laryngitis
52. A six years old girl is admitted in the pediatric ward for chest infection. Past history reveals recurrent chest infections. There is also a history of recurrent abdominal pain and passage of large offensive stools O/E Child has failure to thrive and all growth parameters of the child are below third centile. What is the most likely diagnosis?
- a. Celiac disease  
b. Cystic fibrosis  
c. Ig A deficiency  
d. Autoimmune enteropathy  
e. Fanconi's anemia
53. A 10 months old infant presents with respiratory distress to ER. He was alright 3 days back when he developed low grade fever, cough & runny nose. He was given antipyretics & syrup amoxicillin but his condition didn't improve. He is tachypneic with lower chest in-drawing & nasal-flaring. Auscultation reveals fine rhonchi scattered throughout the chest. What is the most likely Diagnosis?
- a. Croup  
b. Asthma  
c. Bronchiolitis  
d. Pneumonia  
e. Foreign body
54. A 3 years old presents to ER with 5 days' history of low fever and cough. Fever was initially low grade and intermittent but has increased over the last couple of days. He was taken to a local G.P who prescribed him paracetamol and co-amoxiclav. His condition didn't improve and he has developed respiratory distress. Clinical examination shows sick looking child with R/R of 45 /minutes, fever 102 F. Auscultation shows reduced air entry on the left side of the chest. What is the best management step?
- a. Admit and start i.v antibiotics only  
b. X-ray chest followed by chest tube insertion and iv antibiotics  
c. Switch to 4<sup>th</sup> generation cephalosporin  
d. Pleurocentesis only  
e. Send blood cultures and pending reports start iv antibiotics
55. A 3-day neonate born full term SVD with immediate cry is admitted in NICU since morning. He has been vomiting after birth and has abdominal distention. He has not passed stool yet. Clinically he is sick looking, has patent anus but upper abdomen looks distended. Chest is bilaterally clear, although his elder brother is frequently sick with respiratory tract infections. Most likely diagnosis?
- a. Hirschsprung disease  
b. Anal stenosis  
c. Cystic fibrosis  
d. Intestinal atresia  
e. Pyloric stenosis
56. A 2 years old child has been coughing for 3 days and has high grade fever. He was well before but gradually developed fever which responds to antipyretics but recurs back. He is also having cough. O/E he is tachypneic with a R/R of 48/mts, and has lower chest indrawing. What is the best step of management?
- a. Admit and start iv ceftriaxone  
b. Oral Amoxicillin 80 mg/kg/day  
c. Refer urgently to tertiary care hospital  
d. Do CXR, CBC and start iv. antibiotics  
e. Continue supportive care only
57. A five years old child has been brought by his mother to OPD with complaints of frequent getting fevers and cough which eventually ends up in hospitalization or iv antibiotics. His mother states that he also has difficulty falling asleep, or wakes up in the middle of night and snores a lot. Previously he was taken to an ENT specialist who advised surgical intervention in a hope to provide relief from enlarged nasal polyps. He weighs 13 Kgs. What is the most likely diagnosis?
- a. Ig A deficiency  
b. Cystic fibrosis  
c. Bronchiectasis  
d. Primary ciliary dyskinesia  
e. Alpha 1 antitrypsin deficiency
58. A 12 years old child presents with cough which is productive for the past 2 years. He also has a history of recurrent chest infections for which he is put on antibiotics. Sputum is greenish with some reddish tinge off and on. Clinically he looks stunted and weighs 25 Kgs. His chest examination reveals scattered crepts and rales while also has digital clubbing. What is the most likely diagnosis?
- a. Severe pneumonia  
b. Pulmonary tuberculosis  
c. Bronchiectasis  
d. Kartagener syndrome  
e. Hyper IgM syndrome