
CVS QUESTIONS

435's Teamwork

Please contact the team leaders for any suggestion, question or correction.
Clinical cases are from USMLE Qbank, UpToDate, and other universities test banks.

Microbiology.435@gmail.com

Multiple choice questions:

Q1: A 14-year-old boy starts complaining of shortness of breath and palpitations, Chest x-ray films demonstrate pulmonary congestion, and ECG shows alterations in heart rhythm. Echocardiography reveals biventricular dilatation with massive cardiac enlargement. An endomyocardial biopsy shows diffuse interstitial fibrosis, myocyte necrosis, chronic inflammation, and the presence of intracellular protozoan parasites.

Q1: Which of the following diseases does the patient have?

- A) Chagas
- B) Lyme
- C) SLE

Q2: What is the most common etiological factor of myocarditis?

- A) Viral
- B) Mycoplasma
- C) Lyme disease

Q3: ECG in pericarditis can show?

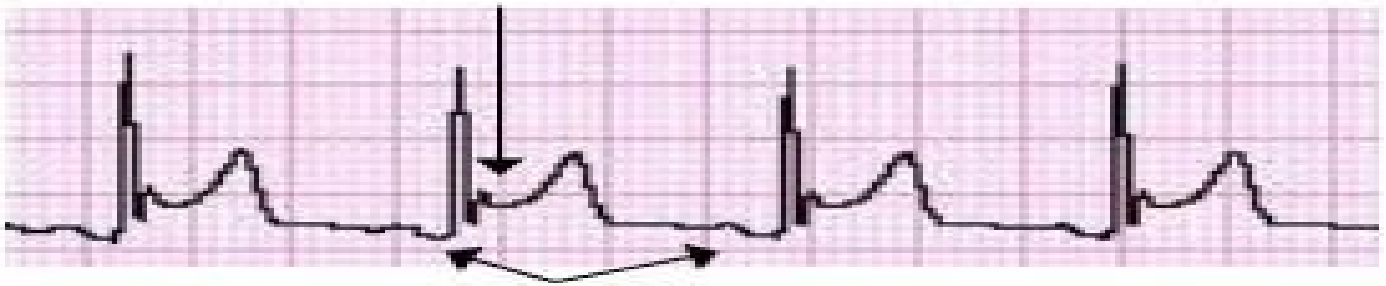
- A) PR elevation
- B) ST elevation
- C) ST depression
- D) Normal T-wave

Q4: Antibiotics, NSAIDs, colchicine used for?

- A) Treats pericarditis
- B) Complicates pericarditis
- C) Causes pericarditis

Q5: This ECG shows?

- A) Myocarditis
- B) Congestive heart failure
- C) Endocarditis
- D) Acute pericarditis



Q6: A farmer who had lung cancer was feeding his birds, 3 days later he started having sudden pleuritic chest pain, fever, dyspnea, What is the best method of detection?

- A) CBC
- B) Blood culture
- C) Pericardial Fluid
- D) ECG

Extra information for your own knowledge: here that the patient is immunocompromised -> fungal infection "Histoplasma" and its transmitted by breathing in spores of a fungus often found in bird and bat droppings.

Q7: A 45 years old saudi male came in to the hospital with cough, chest pain, dyspnea, and weight loss. Physical examination: Increased JVP, Fever, Tachycardia
Tuberculin skin test was positive.

What's the best treatment?

- A) RIF + isoniazid
- B) NSAIDs
- C) Colchicine
- D) Anticoagulants

Q8: An african thin man was diagnosed with pericarditis. Knowing that he work as a Dustman, what is the most likely agent that is causing his disease?

- A) TB
- B) Coxsackie B
- C) Corynebacterium diphtheriae
- D) Other causative agent

Q9: A child has been diagnosed with myocarditis, on clinical examination, the doctor confirmed that he has pharyngitis associated with a thick membrane. What is the most likely agent that is causing his disease?

- A) ATB
- B) Coxsackie B
- C) Corynebacterium diphtheriae
- D) Other causative agent

Q10: An American man was confirmed to have myocarditis with severe symptoms that required him to be hospitalized. What is the most effective antibiotic for his case?

- A) Penicillin
- B) Tetracycline
- C) RIF + INH + Streptomycin
- D) No antibiotics can be used

Q11: 47-years-old woman was diagnosed with TB Pericarditis. What is the best test that will support the diagnosis with high accuracy?

- A) CBC
- B) Pericardial biopsy
- C) Aspiration of pericardial fluid
- D) Tuberculin skin test

Q12: Pericarditis and myocarditis share some common characteristics. Which of the following is not true about them?

- A) Lead to JVP
- B) Coxsackie A is the common etiology
- C) Always have severe symptoms
- D) Difficult to diagnose

Answers Bank

Q1 → A | Q2 → A | Q3 → B | Q4 → A | Q5 → D | Q6 → C | Q7 → A | Q8 → A |
Q9 → C | Q10 → D | Q11 → B | Q12 → A

Short answer questions:

A 23 Year old man who is a part in the The American Cat Fanciers Association, presented to the hospital with sudden sharp pleuritic chest pain, fever, dyspnea and friction rub, he said that he's pain is worse by lying supine, relieved by sitting and leaning forward.

Blood test showed elevated ESR and leukocytes.

Q1: What is your differential diagnosis?

Answer: Pericarditis.

Explanation: He's a 23 years old male, Sudden sharp chest pain with "Friction Rub" and the pain is worse when he's lying.

Q2: What etiological factor is able to cause such disease?

Answer: Disseminated toxoplasmosis.

Explanation: Disseminated toxoplasmosis usually in patients who has cats.

Q3: What are the best detection methods that you would use?

Answer:

- Caseous Pericarditis: Tuberculous in origin.
- Serous Pericarditis: Due to autoimmune diseases (Rheumatoid Arthritis, SLE).
- Fibrinous Pericarditis.

Q4: What's the best test used to confirm your diagnosis?

Answer:

- ECG (will show ST elevation, PR depression, T-wave inversion).

An 18 year old female, who present to the Emergency Department with fatigue, abdominal pain and loss of consciousness.

She had no previous medical history and no previous cardiac problems. Four days prior, she started feeling tired, had intermittent headaches and abdominal pain, and vomited twice. Over the previous 24 hours her symptoms worsened, becoming increasingly tired and she continued to have abdominal pain.

On examination the doctor noticed the rash, with no pitting edema, no clubbing or cyanosis.

Tests revealed: elevated WBC,ESR, troponins. High levels of IgM and IgG.

Q1: What is your differential diagnosis?

Answer: Myocarditis.

Explanation: headache, tiredness, abdominal pain and tests results.

Q2: What is the most common etiology of such disease?

Answer: Coxsackievirus B.

Explanation: Viral infections are the most common etiology of myocarditis.

Q3: What is the best treatment for such disease?

Answer:

- Supportive treatment: NSAID, Steroids.

Q4: Which drug group should be avoided with such disease? (Pharmacology)

Answer:

- Sympathomimetic agents.

Explanation: because they increase the extent of myocardial necrosis and mortality.

Beta-blockers should be avoided in the acutely decompensating phase of illness.

Treatment of myocarditis includes supportive therapy for symptoms of acute heart failure with use of diuretics, nitroglycerin/nitroprusside, and angiotensin-converting enzyme (ACE) inhibitors. Inotropic drugs (eg, dobutamine, milrinone) may be necessary for severe decompensation, although they are highly arrhythmogenic.

Long-term treatment follows the same medical regimen, including ACE inhibitors, beta-blockers, and aldosterone receptor antagonists. However, in some instances, some of these drugs cannot be implemented initially because of hemodynamic instability.