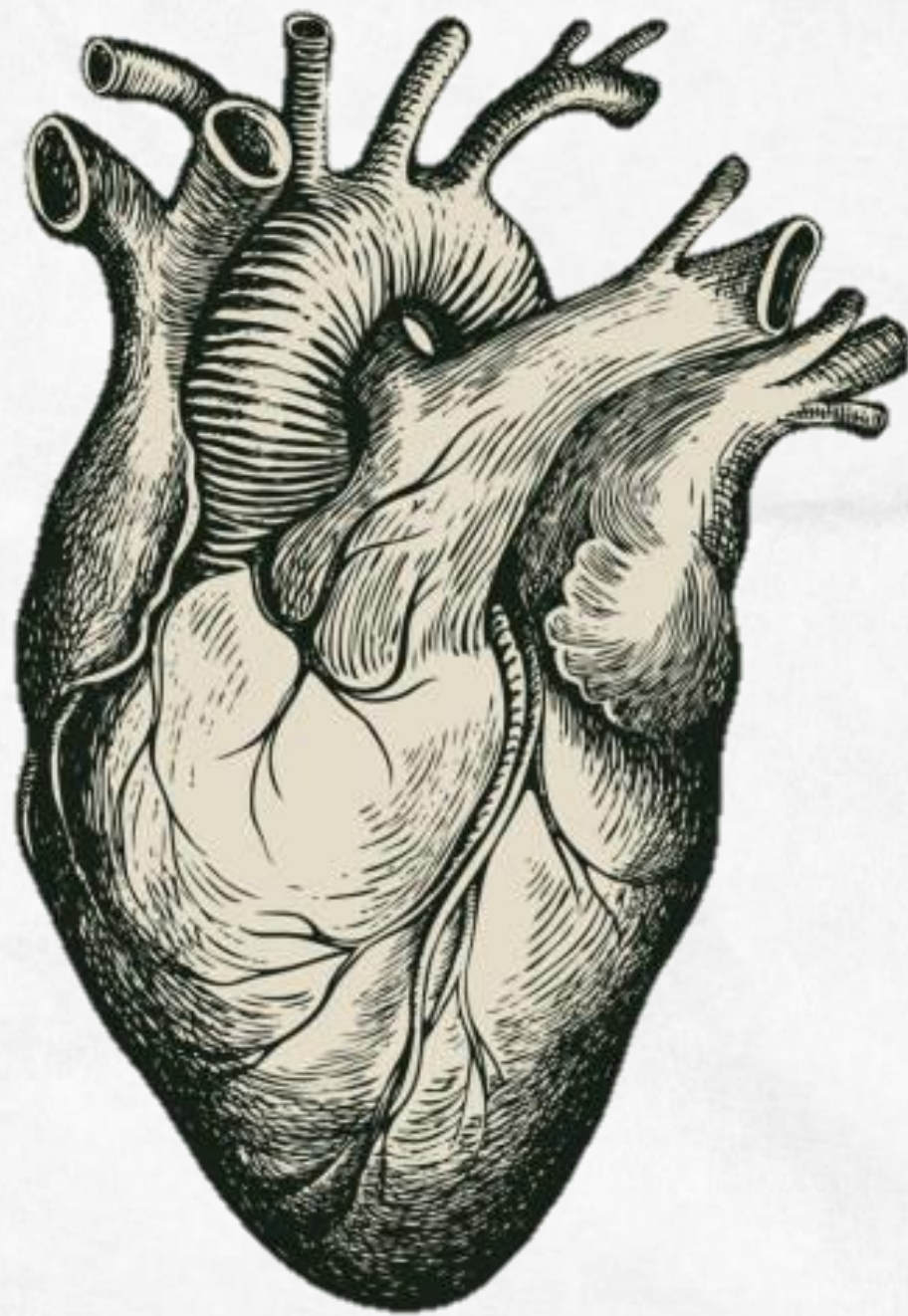


Internal Medicine



Cardiology rotation - Past papers

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-The **colored question numbers** are mentioned more than once so focus on them-

Cardiology rotation

1. Adenosine may terminate all of the following tachycardias except:

- A) AV re-entrant tachycardia.
- B) AV nodal re-entrant tachycardia.
- C) Atrial fibrillation.
- D) Antidromic tachycardia.
- E) Atrial tachycardia.

ANSWER : D

2. A 55-year-old man comes to the office for routine follow-up. Medical history includes hypertension, hyperlipidemia, coronary artery disease, stage 3 chronic kidney disease, and type 2 diabetes mellitus. Current medications include carvedilol, amlodipine, furosemide, lisinopril, nitroglycerin transdermal patch, insulin, simvastatin, aspirin, and gabapentin. The patient appears well, and he is not in acute distress. Body mass index is 27.9 kg/m². Pulse rate is 88/min, and blood pressure is 172/88 mmHg in the left arm and 170/78 mmHg in the right arm. Which of the following findings in this patient is the most likely cause of continued uncontrolled hypertension?

- A) History of hyperlipidemia.
- B) Age of patient.
- C) Body mass index.
- D) Smoking.
- E) Non-compliance with drug regimen.

ANSWER : E

3. Which of the followings does not increase the incidence of bleeding in patient with atrial fibrillation on warfarin?

- A) Age above 55 years.
- B) Alcohol ingestion.
- C) Hypertension.
- D) Renal Failure.
- E) Stroke.

ANSWER : A

Cardiology rotation

4. 23 years old female presented with two hours history of palpitation and dyspnea, on evaluation emergency room her blood pressure 110/70mmHg, HR 160BPM, and bilateral chest wheezes. Her ECG shows narrow complex tachycardia with one P wave for each QRS complex. What is the best management at this time:

- A) IV Metoprolol.
- B) IV Adenosine.
- C) IV Amiodarone.
- D) IV Lidocaine.
- E) IV Diltiazem.

ANSWER : B

5. Which of the following biomarkers is most accurate for the diagnosis of heart failure?

- A) Troponine I.
- B) Troponine T.
- C) Creatinine Phosphokinase CK.
- D) Brain natriuretic peptide (BNP).

ANSWER : D

6. Which of the following statements about natriuretic peptides is FALSE?

- A) Elevated plasma BNP levels predict adverse outcomes in patients with acute coronary syndromes.
- B) Prohormone BNP is cleaved into the biologically inactive N-terminal (NT) proBNP and biologically active BNP.
- C) Circulating levels of NT-proBNP levels decrease with age.
- D) Circulating levels of both atrial natriuretic peptide and brain natriuretic peptide (BNP) are elevated in patients with heart failure.
- E) Plasma BNP level is useful in distinguishing cardiac from noncardiac causes of dyspnea in the emergency department setting.

ANSWER : C

7. A 56-year-old male comes to your clinic requesting advice after recent cardiac surgery. The patient had a long-standing murmur and was diagnosed with mitral stenosis. He eventually underwent repair with a prosthetic valve and his symptoms of dyspnea have resolved. He has resumed physical activity and seeks to maintain his current health. He wants advice on future procedures and possible risk of infection. Which procedure will you advise warrants such treatment solely for endocarditis prophylaxis?

- A) Colonoscopy.
- B) Wisdom tooth extraction.
- C) EGD.
- D) Bronchoscopy without biopsy.
- E) Dilatation ureteral stricture.

ANSWER : B

Cardiology rotation

8. You have been treating a 75-year-old man for hypertension for the last 20 years. He frequently misses medication doses, and his blood pressure is rarely well controlled. In the office today, his blood pressure is 165/90. He states that he feels well. Which of the following would you expect on his physical exam?

- A) Basilar crackles in the lung fields.
- B) S4 gallop and a left ventricular heave.
- C) S4 gallop and a right ventricular heave.
- D) S3 gallop and a left ventricular heave.
- E) Papilledema.

ANSWER : B

9. The best method to treat a collapsed patient in anaphylactic shock is:

- A) Intubation
- B) Intravenous adrenaline
- C) Albuterol as a bronchodilator
- D) Antihistamines
- E) High dose of steroids

ANSWER : D

10. A 32-year-female was noted to have mild reduction in exercise capacity over the past 6 to 12 months. On physical examination, the blood pressure is 100/70 mm Hg and the pulse is 68/min and regular. The apical impulse is not displaced. The S1 is normal. The S2 is split throughout the respiratory cycle. A grade 2/6 midsystolic murmur is noted at the second left intercostal space. There is a grade 2/6 diastolic rumble noted at the lower left sternal border. Both murmurs increase with inspiration. The remaining findings on physical examination are unremarkable. An electrocardiogram demonstrates normal sinus rhythm with right axis deviation and normal intervals. Which of the following is the most likely diagnosis in this patient?

- A) Left atrial myxoma
- B) Mitral stenosis.
- C) Atrial septal defect
- D) Hypertrophic cardiomyopathy
- E) Pulmonary artery hypertension

ANSWER : C

Cardiology rotation

11.

- A) Sinus rhythm with frequent Premature atrial contraction
- B) Sinus bradycardia
- C) Atrial fibrillation.
- D) Third degree AV nodal block
- E) Second degree AV block



ANSWER : D

12. The first ring in the chain of survival indicates:

- A) Starting chest compression after confirmation of cardiac arrest
- B) Delivery of DC shock for the patient
- C) Intensive care unit admission
- D) Calling the cardiac arrest team
- E) Recognition of patients at risk of developing cardiac arrest

ANSWER : E

13. A patient with bilateral lower limb edema, JVP 4cm above sternum ...

All can cause his condition except:

- A) Right side heart failure
- B) Cirrhosis
- C) Nephrotic
- D) Pelvic venous fibrosis

ANSWER : A

14. Otherwise healthy 21 year old patient with ST elevation in more than 7 leads,
What is the best treatment:

- A) Aspirin and heparin
- B) Prednisone
- C) Colchicine

ANSWER : C

Cardiology rotation

15. All can cause ST elevation except:

- A) Coronary spasm
- B) Constrictive pericarditis
- C) Hyperkalemia
- D) Ventricular aneurysm

ANSWER : B

16. All of the following are associated with cardiac constrictive pericarditis except:

- A) Edema
- B) Ascites
- C) Hepatomegaly
- D) Pulsus alternans

ANSWER : D

17. Which of the following doesn't support plaque rupture in atherosclerosis:

- A) Low fibroblast
- B) High inflammatory cells
- C) Abundant smooth muscles

ANSWER : A*

18. Which of the following conditions is NOT often associated with a prominent R wave in electrocardiographic lead V1?

- A) Duchenne muscular dystrophy.
- B) Wolff-Parkinson-White syndrome.
- C) Left anterior fascicular block.
- D) Posterior myocardial infarction.
- E) Right ventricular hypertrophy

ANSWER : C

Cardiology rotation

19. A 28-year-old woman with peripartum cardiomyopathy, left ventricular ejection fraction 25%, and a dual chamber implantable cardioverter-defibrillator (ICD) comes to see you for a routine clinic evaluation. She is able to perform most of her daily activities without limitation, but becomes short of breath when walking one flight of stairs. She is currently treated with metoprolol succinate 50 mg daily, candesartan 32 mg daily, furosemide 40 mg daily, and spironolactone 25 mg daily. On examination the heart rate is 84 beats/min, blood pressure 110/70 mm Hg, jugular venous pressure 7 cm, the lungs are clear to auscultation, and there is no peripheral edema. The electrocardiogram shows sinus rhythm with right bundle branch block and QRS duration of 110 ms. Which of the following is the most appropriate next step in her heart failure management?

- A) Add ivabradine 5 mg twice daily.
- B) Her symptoms are stable; make no changes to the regimen.
- C) Substitute candesartan with sacubitril/valsartan 24/26 mg twice daily.
- D) Increase metoprolol succinate to 100 mg once daily.
- E) Upgrade her ICD to a device that also provides cardiac resynchronization therapy (biventricular pacing).

ANSWER : D

20. A 82-year-old man with diabetes mellitus and exertional angina is found to have three-vessel coronary artery disease and a left ventricular ejection fraction of 40%. He undergoes successful coronary artery bypass graft surgery. A rhythm strip obtained on the second postoperative day shows atrial fibrillation. Preoperative administration of one of the following therapies did not prevent the occurrence of this arrhythmia?

- A) Sotalol.
- B) Amiodarone.
- C) Digoxin.
- D) Metoprolol.
- E) Atorvastatin

ANSWER : E

21. A 28 years old female presented with chest pain of one week duration described as sharp retrosternal pain, her symptoms improve with sitting and worsening when lying flat. Her Examination pericardial friction rub and her ECG shows diffused concave ST elevation and PR segment depression. Regarding this case, which of the following is true?

- A) Most cases are symptomatic.
- B) Heparin is the first line therapy.
- C) Tamponade is a common complication.
- D) Steroid is the treatment of choice.
- E) Colchicine decreases the recurrence rate.

ANSWER : E

Cardiology rotation

22. A 27-year old male patient with a history of lymphoma presented to the emergency room with shortness of breath that started few days ago. Upon physical exam, his heart rate was 120 bpm (regular), blood pressure of 90/60 mm Hg and his systolic blood pressure dropped to 75 mm Hg during inspiration and pulse oximetry of 94% on room air. His cardiac and respiratory exam revealed distant heart sounds with increased JVP and clear lungs. What is the next appropriate step?

- A) Synchronized cardioversion.
- B) IV adenosine.
- C) Computed tomography of the thorax with contrast to rule out pulmonary embolism.
- D) Foley's catheter and intravenous (IV) torsemide.
- E) Pericardiocentesis.

ANSWER : E

23. A 63 years old ICU patient, doing well and was planned to be discharged to the floor, suddenly complained of chest pain and became unresponsive. His blood pressure was 75/40 mmHg his ECG showed the attached rhythm. The treatment of choice in this case is:

- A) Digoxin oral administration.
- B) Amiodarone infusion.
- C) Metoprolol intravenous boluses.
- D) Cardioversion that is synchronized.
- E) Adenosine 6,12,12 mgs.



ANSWER : D

24. A 60-year-old patient, presented with sudden severe right leg pain of 1-hour duration. On examination: right leg is cold with no palpable pulses. Which of the following is the least possible cause?

- A) Sick sinus syndrome.
- B) Paroxysmal atrial fibrillation.
- C) Constrictive pericarditis.
- D) Infective endocarditis.
- E) Anterior myocardial infarction.

ANSWER : C

25. A 60-year-old man with hypertension and continued tobacco use visits your office for a physical. Initial labs reveal a total cholesterol of 340, LDL of 210, and HDL of 35. What would you recommend to lower his cholesterol?

- A) Start diet therapy.
- B) Start diet therapy and an exercise program.
- C) Start diet therapy, an exercise program, and a statin.
- D) Repeat the labs to confirm the cholesterol measurement and then start diet therapy.
- E) Repeat the labs to confirm the cholesterol measurement and then start medication

ANSWER : C

Cardiology rotation

26. What is the condition that is associated with the highest risk of developing infective endocarditis?

- A) Severe aortic regurgitation.
- B) Mitral regurgitation.
- C) Rheumatic fever with valvular heart disease.
- D) Mitral valve prolapse.
- E) Prosthetic valve.

ANSWER : E

27. A 59 Years old male patient who is known to have Diabetes and hypertension presented with four hours history of retrosternal chest pain associated with nausea and vomiting, his ECG is shown below. What is your diagnosis?

- A) Posterior MI
- B) Anterior MI
- C) Inferior MI
- D) Interoposterior MI
- E) Pericarditis



ANSWER : B

28. A 23 years old female college student presented with two hours history of palpitation and dyspnea, on evaluation in the emergency room her blood pressure 110/70mmHg, HR 160BPM. The rest of her examination is normal. Her ECG is shown below. What is the best management at this time:

- A) IV Diltizem
- B) IV Adenosine
- C) IV Metoprolol
- D) IV Digoxin
- E) IV Amiodarone

ANSWER : E

29. The dose of adrenaline during CPR is:

- A) 2 mgs every 2 minutes
- B) 2 mgs after every third cycle
- C) 1 mg every one minute
- D) 1 mg every 10 minutes
- E) 1 mg after every second cycle

ANSWER : E

Cardiology rotation

30. A Patient with acute right lower limb pain, all can cause this except:

- A) Constrictive pericarditis
- B) A fib
- C) Paroxysmal SVT
- D) Bacterial endocarditis

ANSWER : A

31. Echocardiogram can show all of the following except:

- A) Aortic stenosis
- B) ASD
- C) Coronary artery calcification
- D) Mitral incompetence

ANSWER : C

32. A Patient on Digoxin developed loss of appetite, vomiting, ... Which of the following might have caused his symptoms:

- A) hypocalcemia
- B) hypoxia
- C) hypothyroidism
- D) hypokalemia

ANSWER : D

33. A Patient with suprasternal thrills, ejection click after S1, flow ejection systolic murmur, single S2, systolic heave in the left supra-sternal fossa, what would be the cause:

- A) Aortic valve stenosis
- B) Pulmonic valve stenosis
- C) Coarctation of aorta
- D) PDA

ANSWER : B

Cardiology rotation

34. All can be associated with endocarditis except:

- A) Anti A50
- B) Hematuria
- C) A fib
- D) Rheumatoid factor

ANSWER : A

35. 78 y/o female smoker with HTN, DM hyperlipidemia and TIA, what is the CHADVASC score

- A) 1
- B) 3
- C) 5
- D) 7
- E) 9

ANSWER : D

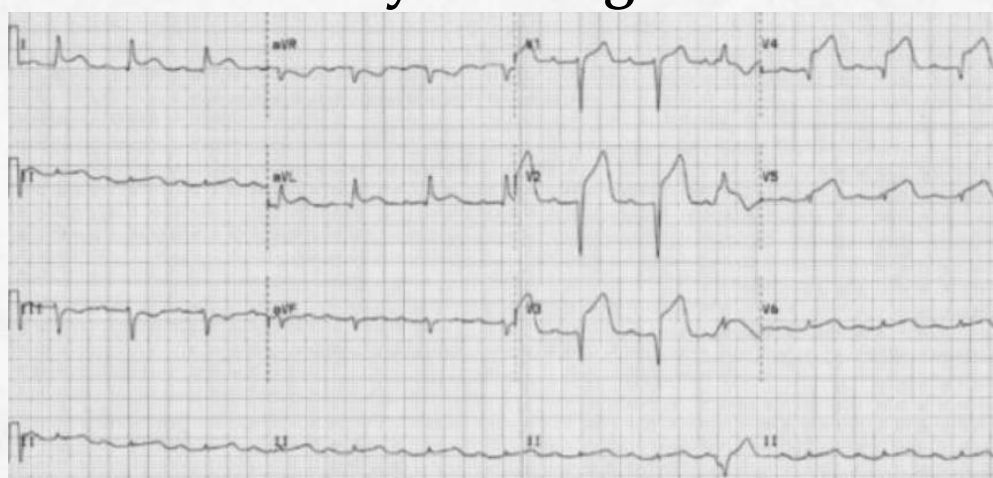
36. which of the following is not associated with constrictive pericarditis?

- A) Pitting lower limb edema
- B) Hepatomegaly
- C) Pulsus alternans
- D) Increased JVP

ANSWER : C

37. 59 Years old male patient who is known to have Diabetes and hypertension presented with four hours history of retrosternal chest pain associated with nausea and vomiting, his ECG is shown below. What is your diagnosis?

- A) post MI
- B) ant MI
- C) lat. MI
- D) inferoposterior MI
- E) pericarditis



ANSWER : B

Cardiology rotation

38. Which of the following indicates a plaque susceptible to rupture:

- A) thick fibrous cap
- B) abundant smooth muscles
- C) abundant inflammatory cells
- D) small lipid pool

ANSWER : C

39. In the definition of drug resistant hypertension, 3 drugs must have been given, which type of drugs must be included in the definition as part of them?

- A) Beta Blockers
- B) Diuretics
- C) ACEi

ANSWER : B

40. HF patient with EF 35, he takes Captopril, Metoprolol and furosemide which drug can be added to his prescription to reduce mortality?

- A) Losartan
- B) Digoxin
- C) Spironolactone

ANSWER : C

41. Which of the following procedures carries the highest risk to develop endocarditis ?

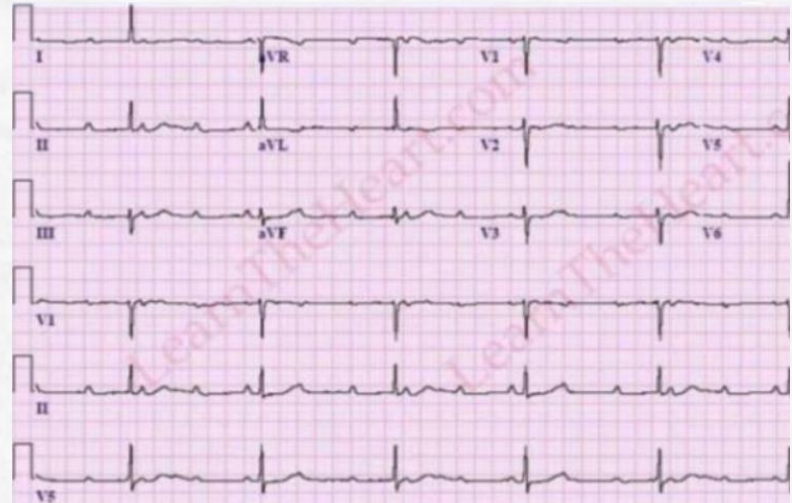
- A) Mitral valve prolapse
- B) Mitral valve ring repair
- C) Severe mitral regurgitation
- D) Acquired valvular heart disease with rheumatic fever

ANSWER : B

Cardiology rotation

42. 80 year old woman presented to the ER with 3 week history of dizziness and palpitations - sth like that- she was previously normal and her activity was good, according to her ECG, what is the diagnosis:

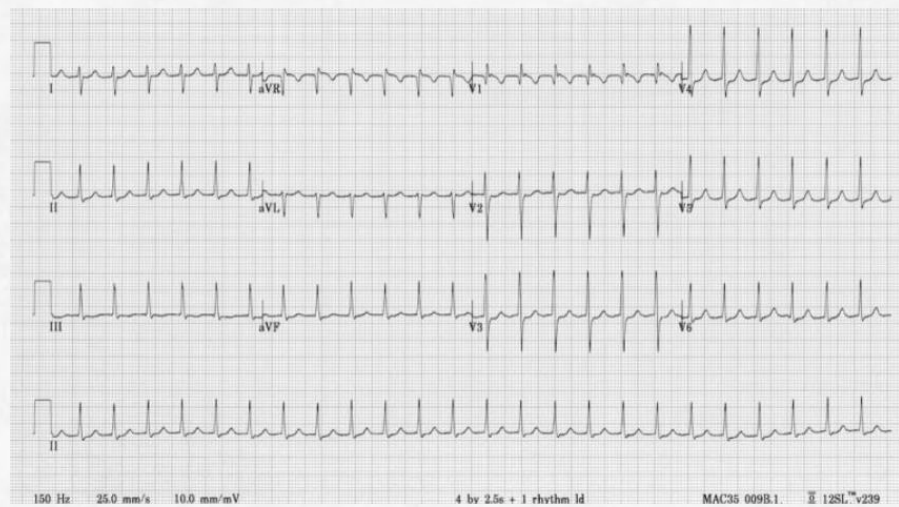
- A) sinus rhythm with PAC
- B) sinus brady
- C) a fib
- D) 2nd degree heart block
- E) 3rd degree heart block



ANSWER : E

43. Patient complained of palpitations, ECG is shown below, what is the Dx?

- A) Anti-dromic AVRT
- B) Sinus Tachycardia
- C) Ventricular Tachycardia
- D) AVNRT



ANSWER : D

44. In aortic stenosis, which of the following carries the highest 1-year mortality risk?

- A) Angina
- B) Syncope
- C) Heart failure
- D) a fib

ANSWER : C

45. A 32-year-female was noted to have mild reduction in exercise capacity over the past 6 to 12 months. On physical examination, the blood pressure is 100/70 mm Hg and the pulse is 68/min and regular. The apical impulse is not displaced. The S1 is normal. The S2 is split throughout the respiratory cycle. A grade 2/6 midsystolic murmur is noted at the second left intercostal space. Both murmurs increase with inspiration. The remaining findings on physical examination are unremarkable. An electrocardiogram demonstrates normal sinus rhythm with right axis deviation and normal intervals. Which of the following is the most likely diagnosis in this patient?

- A) Left atrial myxoma
- B) Mitral stenosis.
- C) Atrial septal defect
- D) Hypertrophic cardiomyopathy
- E) Pulmonary artery hypertension

ANSWER : C

Cardiology rotation

46. A patient with bilateral lower limb edema, JVP 4cm above sternum ... All can cause his condition except:

- A) Right side heart failure
- B) Cirrhosis
- C) Nephrotic
- D) Pelvic venous fibrosis

ANSWER : A

47. A young male patient had a holosystolic apical murmur that radiated to his left axilla after he underwent a dental extraction, an echo revealed severe mitral flial movement indicating mitral regurgitation, what is the diagnosis?

ANSWER : infective endocarditis

48. Clinical scenario with ejection click on right 2 ICS, which test is best to diagnose?

ANSWER : TTE

49. Case: A 22 year old male patient presented with severe pulsating headache BP:190/110 mmhg in the upper limbs with weak lower extremity pulses, what is the next step:

ANSWER : Thoracic CT angio

Cardiology rotation

50. Wrong about constrictive pericarditis

ANSWER : Pulsus alternans

51. Patient with stable angina, not a factor that increases risk of adverse event:

ANSWER : high HDL

52. Not a component of the metabolic syndrome:

ANSWER : LDL > 130

53. Not a drug that reduces mortality in a patient with congestive heart failure:

ANSWER : Furosemide

Cardiology rotation

54. Least likely to cause atrial fibrillation:

ANSWER : hypothyroidism

55. A patient with a systolic murmur that increases with standing and valsalva, and decreases with squatting, most likely cause:

ANSWER : hypertrophic obstructive cardiomyopathy

56. Blood pressure 135/92, stage of HTN is:

ANSWER : stage 1

57. A patient on sildenafil, contraindicated drug:

ANSWER : nitrate

Cardiology rotation

58. Most common cause of HF exacerbation:

ANSWER : Noncompliance to drugs and medications.

59. True about HOCM?

ANSWER : Autosomal dominant in 50% of cases

60. A case of mitral stenosis (diastolic murmur with opening snap), which is true?

ANSWER : Atrial fibrillation is commonly associated with it.

61. Patient with bilateral lower limb edema and high JVP, most likely cause?

ANSWER : Right-sided heart failure

Cardiology rotation

62. Feature of vulnerable plaque?

ANSWER : Large lipid core

63. A patient with DM and HTN but no other cardiac symptoms, which stage of HF?

ANSWER : Stage A

64. One of the following is a risk factor of stroke in non-valvular atrial fibrillation:

ANSWER : age above 75

65. Case scenario of bradycardia, chest pain, and hypotension.. what to give ?

ANSWER : IV adenosine

Cardiology rotation

66. Doesn't increase troponin?

ANSWER : Pericarditis

67. Patient with signs of right heart failure, clear lungs, was treated with radiation for Hodgkin?

ANSWER : Constrictive pericarditis

68. Which of the following doesn't improve mortality in heart failure:

ANSWER : Furosemide

69. A patient with ejection click on upper left sternal border with 4/6 systolic murmur with suprasternal notch thrill:

ANSWER : Pulmonic stenosis

Cardiology rotation

70. What is wrong about Constrictive pericarditis:

ANSWER : Pulsus alternans is a feature

71. All decrease HDL except:

ANSWER : Low carbohydrate intake

72. Most common causative organism of infective endocarditis in IV drug users:

ANSWER : Staph aureus

73. All increase the risk of rupture of atheroma except:

ANSWER : High smooth muscle cell content

Cardiology rotation

74. All are risk factors for CAD except:

ANSWER : Low homocystine

75. A character that makes the atheromatous plaque less likely to cause ACS:

ANSWER : high smooth cells

76. Least likely to cause systolic dysfunction:

ANSWER : severe mitral stenosis

77. A patient with bilateral lower limb edema and normal JVP, most likely cause for their edema:

ANSWER : nephrotic syndrome

Cardiology rotation

78. A patient with left upper sternal border systolic murmur, ejection click, single S2 and a parasternal lift, most likely caused by:

ANSWER : pulmonic stenosis

79. Thiazide does not cause:

ANSWER : hypouricemia

80. A patient with hypertension, most likely cause of death is:

ANSWER : CAD

81. Next step in helping a gasping, unresponsive patient:

ANSWER : call 911

Cardiology rotation

82. Which of the following signs is associated with constrictive pericarditis?

ANSWER : High JVP that increases with inspiration (Kussmal sign)

83. Not associated with ST elevation?

ANSWER: Constrictive pericarditis

84. Patient with DM and HTN, both controlled, what to do?

ANSWER : Measure urine albumin (we don't give ACEI or ARB to diabetics unless they have diabetic nephropathy).

85. Systolic murmur, heard best at left sternal border 2nd intercostal space, with ejection click is:

ANSWER : Pulmonic stenosis

Cardiology rotation

86. A prognostic factor for mortality post-MI:

ANSWER : diabetes (most likely)

87. Patient with typical chest pain, in the last 2 weeks, normal ECG, Dx?

ANSWER : Unstable angina (new-onset angina).

88. Does not increase the survival in HF?

ANSWER : Digoxin

89. Regarding cardiac enzymes, which is wrong?

ANSWER : Troponin can be used 8 days after MI to reveal re-infarction

Cardiology rotation

90. Fixed splitting of S2 throughout the respiratory cycle, Dx?

ANSWER : ASD

91. Which of the following does not increase the risk of thromboembolic events in A.fib patients Hypertension:

ANSWER : High LDL

92. Which is not consistent with JVP of 4 cm above the neck with lower limb edema:

ANSWER : Right heart failure

93. All have a risk of thromboembolism except:

ANSWER : Constrictive pericarditis

اللهم سلم غزاة وأهلها من كل سوء وشر، اللهم انصرهم وثبت أقدامهم وكن لهم ناصرًا ومعينًا

لا تنسوني من صالح دعائكم

Malek Abu Rahma

The End
Good Luck シ