CARDIOVASCULAR

PAST PAPERS

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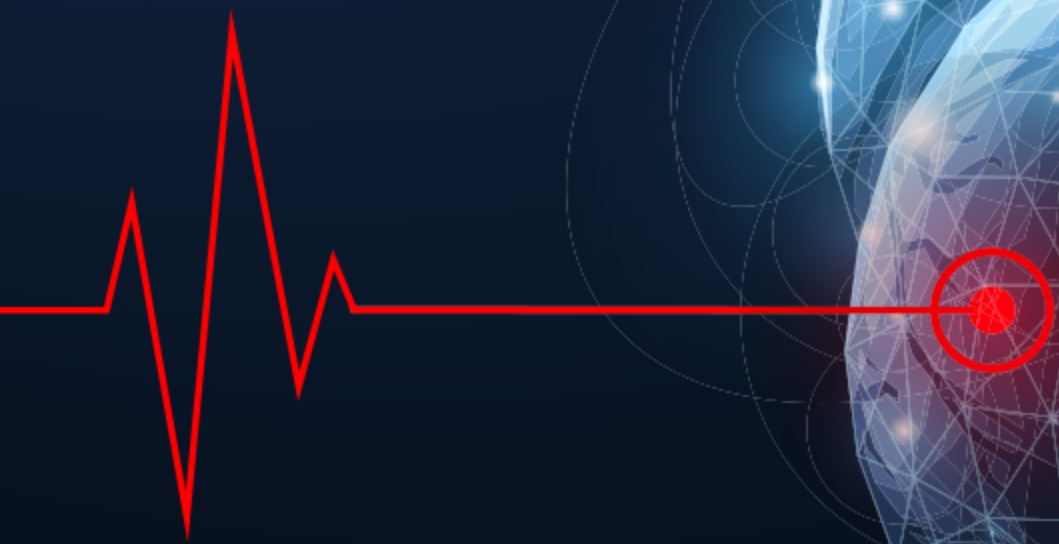


Final exam of (2020+2021)

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.

2) 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? (I believe it's a 6^{th} year question)

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).

3) 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.

4) Which of the following conditions is NOT often associated with a prominent R wave in electrocardiographic lead VIP?

a) Duchenne muscular dystrophy.

b) Wolff-Parkinson-White syndrome.

c) Left anterior fascicular block.

d) Posterior myocardial infarction.

e) Right ventricular hypertrophy

5) 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.

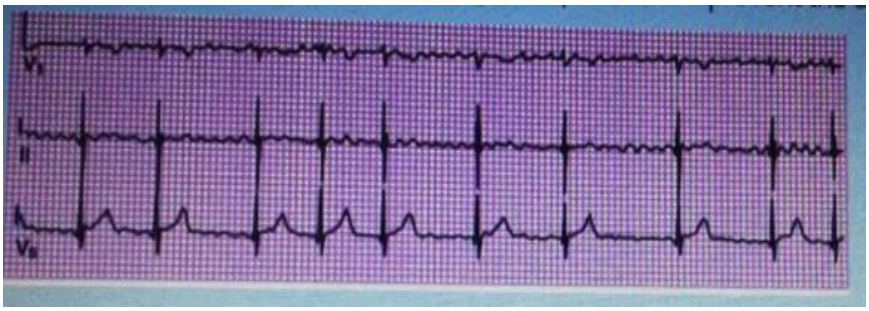
c) Hypertension.

d) Renal Failure.

e) Stroke.

6) 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

7) 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.

8) 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.

9) 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).

10) 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 nub 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.

11) 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.

12) 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.

13) 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.

14) 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.

15) 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.

16) 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

17) 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

- I believe the treatment should be adrenaline then antihistamines since the patient is in shock, but the answer was d according to the past collection :(

18) 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.

19) 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

20) 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?

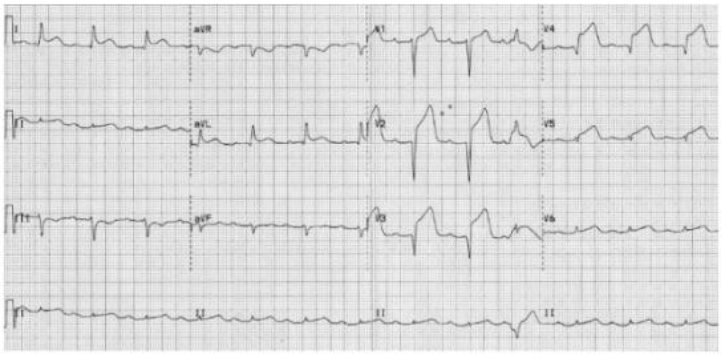
a. Posterior MI

b. Anterior MI

c. Inferior MI

d. Interoposterior MI

e. Pericarditis



21)

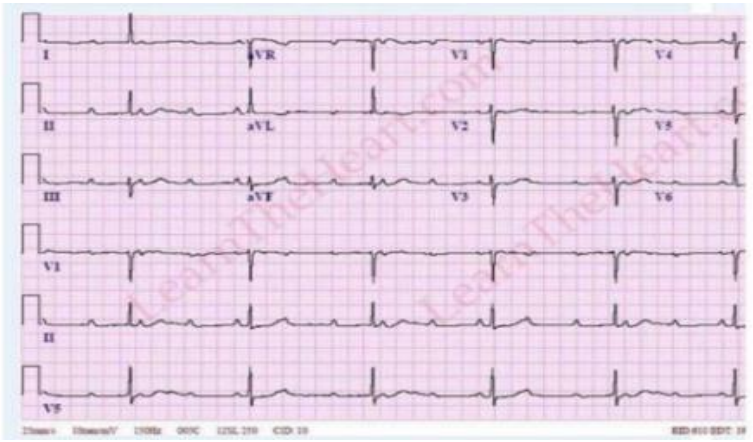
a. Sinus rhythm with frequent Premature atrial contraction

b. Sinus bradycardia

c. Atrial fibrillation.

d. Third degree AV nodal block

e. Second degree AV block



22) 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:

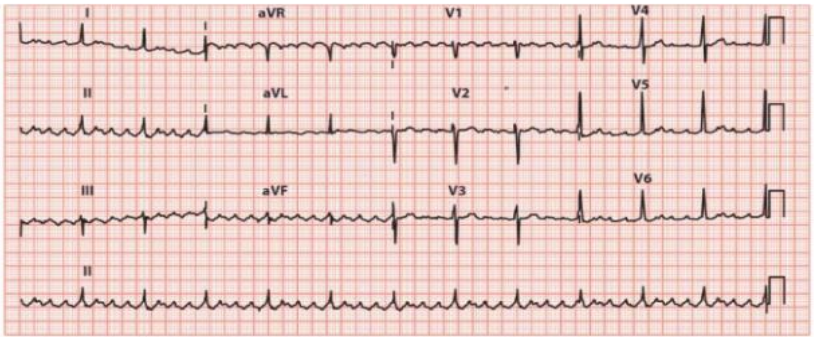
a. IV Diltizem

b. IV Adenosine

c. IV Metoprolol

d. IV Digoxin

e. IV Amiodarone



23) 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

24) 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

1	D	9	D	17	D
2	D	10	E	18	E
3	E	11	C	19	C
4	C	12	D	20	B
5	A	13	B	21	D
6	E	14	C	22	E
7	B	15	B	23	E
8	E	16	C	24	E

Final exam of 2018

1- Wrong about constrictive pericarditis

Answer: Pulsus alternans

2- Patient with stable angina, not a factor that increases risk of adverse event:

Answer: high HDL

3- Not a component of the metabolic syndrome:

Answer: LDL > 130

4- A character that makes the atheromatous plaque less likely to cause ACS:

Answer: high smooth cells

5- Not a drug that reduces mortality in a patient with congestive heart failure:

Answer: Furosemide

6- Least likely to cause systolic dysfunction:

Answer: severe mitral stenosis

7- Least likely to cause atrial fibrillation:

Answer: hypothyroidism (mostly)

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

Answer: nephrotic syndrome

9- A patient receiving doxorubicin for their osteosarcoma, their heart failure grade is:

Answer: A

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

Answer: pulmonic stenosis

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

Answer: hypertrophic obstructive cardiomyopathy

12- Thiazide does not cause:

Answer: hypouricemia

13- Blood pressure 135/92, stage of HTN is:

Answer: stage 1

14- A patient with hypertension, most likely cause of death is:

Answer: CAD (mostly)

15- A patient on sildenafil, contraindicated drug:

Answer: nitrate

16- Next step in helping a gasping, unresponsive patient:

Answer: call 911

Final exam of 2017

1- Most common cause of HF exacerbation:

Answer: Noncompliance to drugs and medications.

2- Which of the following signs is associated with constrictive pericarditis?

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

3- True about HOCM?

Answer: Autosomal dominant in 50% of cases

4- Not associated with ST elevation?

Answer: Constrictive pericarditis

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

Answer: Atrial fibrillation is commonly associated with it.

6- 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).

7- Patient with bilateral lower limb edema and high JVP, most likely cause?

Answer: Right-sided heart failure

8- Systolic murmus, heard best at left sternal border 2nd intercostal space, with ejection click is:

Answer: Pulmonic stenosis

9- Feature of vulnerable plaque?

Answer: Large lipid core

10- A prognostic factor for mortality post-MI:

Answer: diabetes (most likely)

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

Answer: Stage A

12- Patient with typical chest pain, in the last 2 weeks, normal ECG, Dx?

Answer: Unstable angina (new-onset angina).

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

Answer: age above 75

Final exam of 2016

1- Case scenario of bradycardia, chest pain, and hypotension.. not to give ?

Answer: IV adenosine

2- Does not incease the survival in HF?

Answer: Digoxin

3- Doesn't increase troponin?

Answer: Pericarditis

*UJ slides 2023 mentioned that pericarditis DOES increase troponin

4- Regarding cardiac enzymes, which is wrong?

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

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

Answer: Constrictive pericarditis

6-Fixed splitting of S2 throughout the respiratory cycle, Dx?

Answer: ASD

Final exam of 2015

1- Which of the following doesn't improve mortality in heart failure:

Answer: Furosemide

2- Which of the following does increase mortality in myocardial infarction:

Answer: Female gender

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

Answer: Pulmonic stenosis

4- Which of the following does not have pulsus paradoxas?

Answer: Hypertrophic cardiomyopathy*

5- What is wrong about Constrictive pericarditis:

Answer: Pulsus alrernans is a feature

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

Answer: High LDL

7- All decrease HDL except:

Answer: Low carbohydrate intake

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

Answer: Right heart failure

9- Most common causative organism of infective endocarditis in IV drug users:

Answer: Staph aureus

10- A patient with hx suggesting pericarditis (chest pain decrease by leaning forward), which of the following is wrong:

Answer: Steroids are 1st line therapy

11- All increase the risk of rupture of atheroma except:

Answer: High smooth muscle cell content

12- All have a risk of thromboembolism except:

Answer: Constrictive pericarditis

13- All are risk factors for CAD except:

Answer: Low homocystine

Final exam of 2013

1) 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

2) A Patient with acute right lower limb pain, all can cause this except:

a. Constructive pericarditis

b. A fib

c. Paroxysmal SVT

d. Bacterial endocarditis

3) 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

4) Echocardiogram can show all of the following except:

a. Aortic stenosis

b. ASD

c. Coronary artery calcification

d. Mitral incompetence

5) All can cause ST elevation except:

a. Coronary spasm

b. Constrictive pericarditis

c. Hyperkalemia

d. Ventricular aneurysm

6) 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

7) All of the following are associated with cardiac constrictive pericarditis except:

a. Edema

b. Ascites

c. Hepatomegaly

d. Pulsus alternanus

8) A Patient with suprasternal thrills, ejection click after 51, 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. Coarcutation of aorta

d. PDA

9) Which of the following doesn't support plaque rupture in atherosclerosis:

a. Low fibroblast

b. High inflammatory cells

c. Abundant smooth muscles

10) All can be associated with endocarditis except:

a. Anti A50

b. Hematuria

c. A fib

d. Rheumatoid factor

11) All of the following is considered a poor prognostic indicator in anterior Ml except:

a. Being a female

b. Sinus tachycardia

c. Persistent hypertension

1	A	7	D
2	A	8	B
3	C	9	C
4	C	10	A
5	B	11	C
6	D		

{وَفِيٓ أَنفُسِكُمْ ۚ أَفَلَا تُبْصِرُونَ}