

Tanta University

Cardiology Diploma Degree (Policy 2013)

Faculty of Medicine

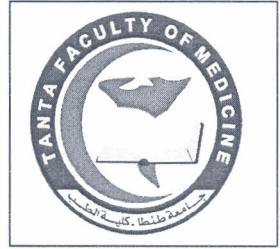
Number of Questions: 29

Department of Cardiology

Time Allowed : 3 Hours (Total 180 Marks)

November 6th, 2021

Final Exam, Second Paper



First: Short Questions (Each Question 15 marks):

1. Scheme of management of dyslipidemia in patients with chronic kidney disease.
2. Scheme of both acute and chronic therapies of focal atrial tachycardia.
3. Risk factors for bleeding with oral anticoagulants.
4. Scheme of management of atrial septal defect.
5. Scheme of diagnostic approach to resistant hypertension.
6. Diagnostic features of constrictive pericarditis.

Second: Ultrashort Questions (Each Question 6 marks):

1. Enumerate initial evaluation of the patients with supraventricular tachycardia.
2. Scheme of clinical evaluation and recommendations for sports participation in individuals with established coronary artery disease.
3. Risk reduction strategies in patients with cyanotic congenital heart diseases.
4. Enumerate congenital heart diseases in adults.
5. Enumerate the cardiovascular diseases that contraindicated with pregnancy.
6. Enumerate lines of management of reflex syncope.
7. Enumerate cardiovascular manifestations of acromegaly.
8. Enumerate benign tumors of the heart.
9. Enumerate measures to prevent contrast induced nephropathy.
10. Enumerate hypertension mediated organ damage.

Third: MCQ (Each Question one mark):

1. Which of the following physiologic changes are associated with pregnancy?
 - A. Increased systolic blood pressure.
 - B. Decreased systemic vascular resistance.
 - C. Decreased cardiac output.
 - D. Reduced blood volume.
 - E. Increased mitral valvular regurgitation.

2. All the following cyanotic congenital heart diseases causes pulmonary venous engorgement EXCEPT:
 - A. Aortic atresia.
 - B. Aortic and mitral atresia.
 - C. Total Anomalous Pulmonary Venous Drainage (TAPVD) with obstruction.
 - D. Ebstein's anomaly.

3. Immediate cause of death in Eisenmenger's include all the following except:
 - A. Dehydration.
 - B. Cerebral Complication.
 - C. Surgery.
 - D. Infective endocarditis.

4. Which of the following is most important for successful resuscitation of an adult patient with (out of hospital) cardiac arrest?
 - A. IV epinephrine.
 - B. Early direct current (DC) shock defibrillation.
 - C. IV antiarrhythmic drugs.
 - D. Early intubation.

5. The bicuspid aortic valve is associated with all but which one of the following diseases/complications?
 - A. Coarctation of the aorta.
 - B. Aortic dissection.
 - C. Infective endocarditis.
 - D. Myxomatous mitral valve.
 - E. Ascending aortic aneurysm.

6. Which one of the following antihypertensive medications might you use to try and prevent new-onset atrial fibrillation?

- A. Atenolol.
- B. Amlodipine.
- C. Bisoprolol.
- D. Digoxin.
- E. Losartan.

7. Commonest clinical manifestation of penetrating injury to the heart is:

- A. A-V Fistula.
- B. Heart Failure.
- C. Cardiac Tamponade.
- D. Intracardiac Shunts.

8. Which is primary malignant tumour of heart?

- A. Papillary fibroelastoma.
- B. Lymphoma.
- C. Fibroma.
- D. Lipoma.

9. According to ESC 2018 HTN guidelines , a blood pressure of 138/88 is considered:

- A. Optimal.
- B. Normal.
- C. High normal.
- D. Grade -1 HTN.

10. According to risk assessment , a 40-years old male patient with FBS = 90mg %, Total Cholesterol = 190 mg %, non-smoker and his Blood Pressure = 190/110 mmHg is considered:

- A. Very high risk.
- B. High risk.
- C. Moderate risk.
- D. Low risk.

Fourth: Problem Solving MCQ (Total 20 marks):

First Problem (6 marks):

A 65 year old male patient who underwent TAVI 6 months ago. He is not hypertensive nor diabetic, and is currently asymptomatic, his examination reveals: no peripheral edema, clear lungs and variable heart sounds. ECG shows atrial fibrillation.

1. Routine OAC use in this patient

- A. Is recommended.
- B. Should be considered.
- C. May be considered.
- D. Not recommended.

Second Problem (7 marks):

A 34-year-old woman attends a routine antenatal clinic at 16 weeks gestation. She has no significant past medical history but suffers with occasional frontal headaches. She is noted to have a blood pressure of 148/76 mmHg. Urinalysis reveals pH 6.5, Protein +1, negative for (nitrates, leucocytes and blood).

2. What is the most likely diagnosis?

- A. Gestational hypertension.
- B. Pre-eclampsia.
- C. HELLP syndrome.
- D. Nephrotic syndrome.
- E. Chronic hypertension.

Third Problem (7 marks):

A 35-year-old female presents with a deep vein thrombosis in the third trimester of pregnancy. Whilst in the Emergency Department she develops a left hemiparesis.

3. What underlying cardiac abnormality is most likely to be responsible?

- A. Primum atrial septal defect.
- B. Secundum atrial septal defect.
- C. Patent foramen ovale.
- D. Ventricular septal defect.
- E. Patent ductus arteriosus.

Good luck

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Faculty of Medicine

Number of Questions: 29 (Total 180 Marks)

Department of Cardiology

Time Allowed : 3 Hours

October 30th, 2021

Final Exam, First Paper



First: Short Questions (Each Question 15 marks):

1. Anticoagulation related complications in patients with prosthetic valves.
2. Management of diuretic resistance in heart failure patient.
3. Scheme of risk-adjusted management strategy for acute pulmonary embolism.
4. Clinical presentations and complications of patients with acute aortic dissection.
5. Use of diagnostic imaging tests in the initial diagnostic management of symptomatic patients with suspected coronary artery disease.
6. Indications of surgery in tricuspid valve disease.

Second: Ultrashort Questions (Each Question 6 marks):

1. Cardiac biomarkers in COVID-19.
2. Enumerate the differential diagnosis of acute coronary syndromes in the setting of acute chest pain.
3. Enumerate recommendations for diagnosis and revascularization of coronary artery disease in patients with valvular heart diseases.
4. Prognostic criteria of heart failure.
5. Enumerate indications of echocardiography in infective endocarditis.
6. Scheme of management of severe symptomatic chronic primary mitral regurgitation.
7. Enumerate transthoracic echocardiography criteria of hypertrophic cardiomyopathy.
8. Enumerate clinical risk factors in high-risk non-cardiac surgery.
9. Enumerate clinical classification of pulmonary hypertension.
10. Enumerate major and minor criteria of rheumatic fever.

Third: MCQ (Each Question one mark):

1- Use of opiates in heart failure is associated with all of the following except:

- A. Greater frequency of mechanical ventilation.
- B. Prolonged hospitalization.
- C. More intensive care unit admissions.
- D. Reduced mortality.

2. All of the following statements regarding the physical examination in aortic regurgitation are true EXCEPT:

- A. The typical murmur is of low frequency and heard best with the bell of the stethoscope placed along the left sternal border.
- B. The severity of regurgitation correlates better with the duration rather than the intensity of the murmur.
- C. A musical murmur ("cooing dove" murmur) usually signifies eversion or perforation of a cusp.
- D. Murmurs auscultated on the right side of the sternum suggest dilatation of the ascending aorta.
- E. The intensity of the murmur is increased by isometric exercise (e.g., strenuous handgrip).

3. All of the following drugs are useful in the treatment of HCM except:

- A. Metoprolol.
- B. Disopyramide.
- C. Enalapril.
- D. Diltiazem.
- E. Phenylephrine.

4. In patients presenting with unstable angina, which of the following is least predictive for short-term death or nonfatal MI?

- A. New onset of exertional angina (i.e. two weeks-two months) CCS class II.
- B. Prolonged chest pain (>20 minutes).
- C. Rest angina with dynamic ST changes.
- D. Angina with new mitral regurgitation.
- E. Angina with S3.

5. Time course from myocardial ischemia to necrosis can be prolonged by all of the following EXCEPT:

- A. Increased collateral flow.
- B. Increased myocardial oxygen consumption.
- C. Preconditioning.
- D. Timely reperfusion.

6. A CT Pulmonary Angiography has the following strength to diagnose Acute Pulmonary Embolism EXCEPT:

- A. Readily available around the clock in most centers.
- B. Excellent accuracy.
- C. Strong validation in prospective management outcome studies.
- D. Low rate of inconclusive results (1-2%).
- E. May provide alternative diagnosis if PE excluded.
- F. Short acquisition time.

7. The only sure sign of DVT in ultrasonography is:

- A. Flow limitation.
- B. Filling defect.
- C. Un-compressibility.
- D. All of the above.
- E. None of the above.

8. Which of the following statements regarding post-myocardial infarction (post-MI) pericarditis is TRUE?

- A. Fibrinolytic therapy increases the incidence of early post-MI pericarditis.
- B. Post-MI pericarditis is more common after non-ST-segment elevation MI compared with ST-segment elevation MI.
- C. When present, clinical pericarditis does not arise until >48 hours after infarction.
- D. The use of heparin is associated with an increased risk of pericarditis.
- E. The incidence of early post-MI pericarditis is related to infarct size.

9. Surgical reconstruction (in distinction to replacement) of the mitral valve is likely to be successful in each of the following patients EXCEPT:

- A. A 33-year-old man with mitral valve prolapse.
- B. A 62-year-old man with severe mitral regurgitation due to annular dilatation after myocardial infarction.
- C. A 40-year-old woman with mitral regurgitation due to ruptured chordae tendineae with active infective endocarditis.
- D. A 70-year-old woman with rheumatic heart disease, calcified mitral valve with deformed leaflets, and combined mitral stenosis and regurgitation.
- E. A 23-year-old man with a congenitally cleft mitral valve.

10. All of the following is correct about Hypokalaemia except:

- A. It is defined as serum potassium <3.5 mmol/L.
- B. May occur in up to 50% of patients with HF.
- C. Hypokalaemia is often induced by loop diuretic and beta blockers administration.
- D. It may cause lethal ventricular arrhythmias.
- E. Its treatment includes the use of RAAS inhibitors, potassium-sparing diuretics, and prescription of oral potassium supplements.

Fourth: Problem Solving MCQ (Total 20 marks):

First Problem (6 marks):

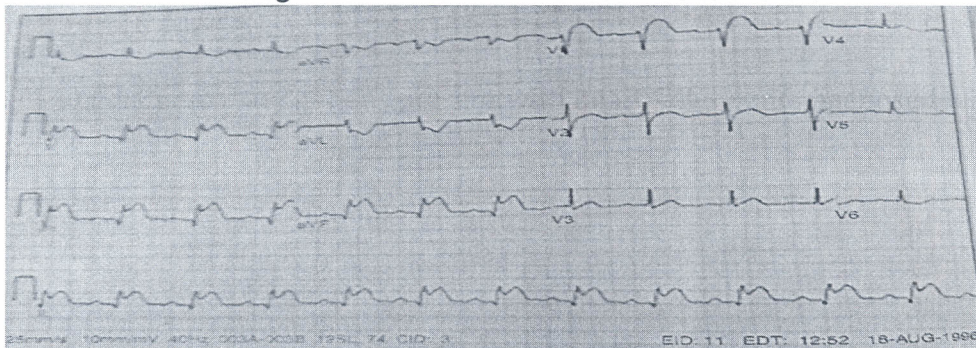
A 70 years old diabetic male patient present with heart failure and diagnosed with severe aortic stenosis and atrial fibrillation.

1. NOACs for stroke prevention:

- A. Is recommended.
- B. Should be considered.
- C. May be considered.
- D. Is not recommended.

Second Problem (7 marks):

A 58-year-old man was admitted to the CCU from the ER. His BP was 85/50. The jugular veins were distended to 10 cm at 30-degree elevation. The 12-lead ECG is shown.



2. Which of the following would be your initial treatment?

- A. Pericardiocentesis.
- B. Place a catheter or hemodynamic monitoring.
- C. Assist circulation with balloon pumping.
- D. Start rapid IV infusion of fluid.
- E. Nitroglycerin infusion.

Third Problem (7 marks):

A 70-year-old man presents with the sudden onset of tearing chest pain. On presentation, his heart rate 130 beats/min with a systolic blood pressure of 80 mmHg. A bedside transesophageal echocardiography (TEE) demonstrates the presence of a proximal aortic dissection. A pericardial effusion with partial diastolic collapse of the right ventricle is also present. Significant respiratory variation is noted across mitral and tricuspid Doppler inflows.

3. Appropriate treatment is:

- A. Immediate percutaneous pericardiocentesis to relieve the tamponade, followed by surgery to replace the ascending aorta.
- B. To proceed immediately to the operating room.
- C. Emergency angiography to define coronary anatomy, followed by surgery.
- D. Intra-aortic balloon pump to stabilize the hemodynamics, followed by surgery.

Good luck