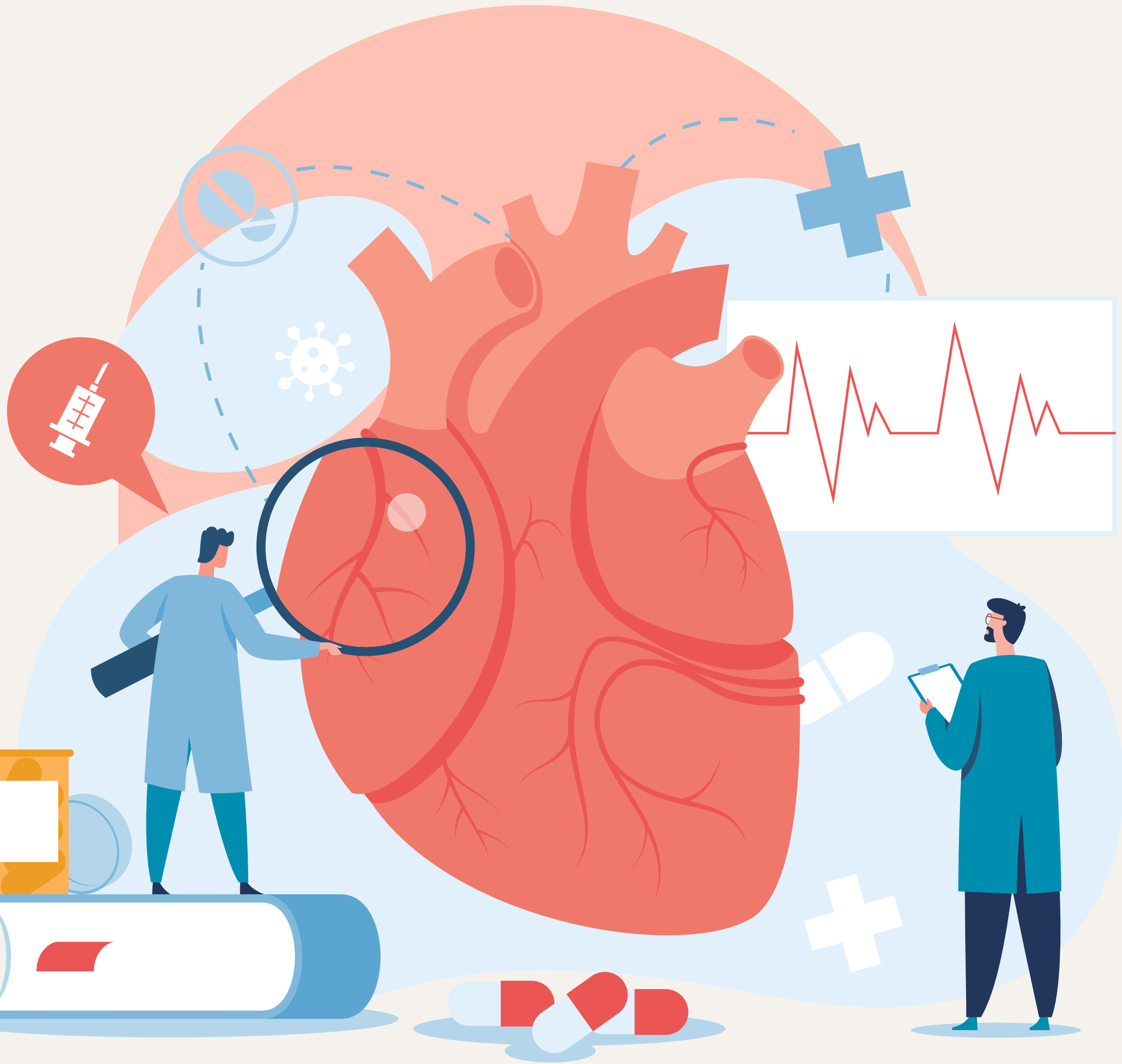
لجنة الطب و الجراحة

CVS

INTERNAL MEDICINE



Archive

CONTANT

ISCHEMIC HEART DISEASE

Myocardial infraction

1) A patient with stable angina — which treatment improves prognosis?
A. Nitrates
B. Aspirin
C. Beta blockers
D. Calcium channel blockers

Ans. C.

2) ST elevation in leads I and aVL indicates infarction in which region?
A. Inferior
B. Anterior
C. Lateral
D. Posterior

Ans.C

3) A patient presents with sudden chest pain and a normal ECG — what is the next best step in management?
A. Echocardiogram
B. Cardiac enzymes
C. Stress test
D. Chest X-ray

Ans.B

4) What is the most common cause of death in myocardial infarction (MI)?
A. Cardiogenic shock
B. Cardiac rupture
C. Ventricular arrhythmias
D. Heart failure

Ans.: C

5) What is the most common cause of death in hypertensive patients?
A. CVA
B. MI
C. Aortic aneurysm
D. Renal failure

Ans : B

6) A patient with previous MI and elevated cholesterol — what is the next step in management?
A. Start aspirin
B. Lifestyle modification only
C. Prescribe statin
D. Check cholesterol again after 3 months

Ans: C

7) Conduction abnormality involving the AV node after MI is due to occlusion of which artery?
A. Left anterior descending
B. Right coronary artery
C. Left circumflex artery
D. Posterior descending artery

Ans: B

ISCHEMIC HEART DISEASE
Myocardial infraction

8) A patient has hyperlipidemia (e.g. 9 mmol/L) and a history of CVA without MI
what is the best management?
A. No treatment
B. Lifestyle only
C. Simvastatin
D. Fibrate

Ans: C

9) A man presents with retrosternal chest pain. ECG shows ST segment depression in leads I and aVL
diagnosis?
A. Posterior MI
B. Inferior MI
C. Lateral MI
D. Anterior MI

Ans: C

10) Three weeks post-MI, patient presents with chest pain. ECG shows persistent ST elevation in anterior leads — diagnosis?
A. Re-infarction
B. Pericarditis
C. Ventricular aneurysm with VT
D. Early repolarization

Ans: C

11) A patient with MI history presents with ST depression in aVF, V2, V3. Pulmonary capillary wedge pressure is normal. Right ventricular pressure is 65/20, RA pressure 25/10, neck veins distended — most likely diagnosis?
A. Mitral valve prolapse
B. Right ventricular infarction
C. Cardiac tamponade
D. Left ventricular failure

Ans: B

12) All the following increase survival in MI except:
A. Heparin
B. Antiplatelets
C. Beta blockers
D. IV nitroglycerin

Ans. D

13) In acute MI, all of the following are true, except:
A. Inferior MI: ST elevation in II, III, AVF
B. Anteroseptal MI: ST elevation in V1-V2-V3
C. In acute MI, thrombolytic therapy achieves 100% reperfusion rate
D. Treatment of MI includes morphine, coronary vasodilation, aspirin

Ans. C

14) ECG shows ST elevation in II, III, AVF — indicates infarction in which region?
A. Anteroseptal MI
B. Anterolateral MI
C. Posterior MI
D. Inferior MI

Ans. D

15) Contraindications of thrombolytics in MI include all EXCEPT:
A. Late MI more than 24 hrs after onset
B. Previous surgery before 3 months
C. Head trauma <8 weeks
D. Elevated ST segment MI

Ans. D

ISCHEMIC HEART DISEASE

Myocardial infraction

16) Nitroglycerin sublingually may help relieve ischemic pain by all EXCEPT:
A. Coronary vasodilation
B. Decreased venous pooling causing increased preload
C. Reduced systemic vascular resistance
D. Reduced resistance in coronary arteries

Ans. B

17) The measurement used to diagnose re-infarction is:
A. Troponin
B. CK-MB
C. LDH
D. Myoglobin
Ans. B

18) The most ischemia-vulnerable segment of the heart is the subendocardium because:
A. Highest oxygen utilization is there
B. Coronary flow to subendocardium occurs almost completely during diastole
C. Subendocardium has diminished aerobic capacity
D. Less potential for collateralization

Ans. B

19) Myocardial ischemia is an imbalance between O_2 supply and demand — all are true EXCEPT:
A. Obstruction of coronary arteries by atherosclerosis
B. Coronary artery spasm
C. Anemia
D. Pericarditis

Ans. D

20) Modifiable risk factors for ischemic heart disease include all EXCEPT:
A. Smoking
B. Hypertension
C. Hyperlipidemia
D. Age

Ans. D

21) Cardiac risk factors for CNS ischemic stroke include all EXCEPT:
A. Atrial fibrillation
B. Supraventricular tachycardia
C. Myocardial infarction
D. Left atrial myxoma

Ans. B

22) Most strongly associated factor with sudden death in first 6 months post-MI:
A. Ventricular ectopics
B. Cigarette smoking
C. Severe coronary disease
D. Low ejection fraction

Ans. D

23) Patient with history of MI, diabetic, hypertensive, on meds, comes with severe chest pain, ECG shows ST elevation, troponin positive, already received aspirin and heparin. Next step?
A. IV GTN infusion
B. 15L O_2 via non-rebreather mask
C. Primary PCI within 4 hours
D. Additional dose of metformin

Ans. C

) A 60-year-old man has an inferior myocardial infarction; his heart rate is 45/min. The artery most likely to be involved in this process is:
A. Right coronary artery
B. Left main artery
C. Left anterior descending artery
D. Circumflex artery
E. Left mammary artery

- **Ans. A**

ISCHEMIC HEART DISEASE

Myocardial infraction

24) ECG with ST elevation in leads II, III, aVF suggests:
A. Anterior MI
B. Lateral MI
C. Right ventricular infarction
D. Posterior MI

Ans. C

25) A 60-year-old man has an inferior MI, heart rate is 45/min. Most likely artery involved is: مكرر*
A. Right coronary artery
B. Left main artery
C. Left anterior descending artery
D. Circumflex artery

Ans. A

26) ONE of the following drugs reduces myocardial remodeling after acute MI:
A. ACE inhibitors
B. Digoxin
C. Verapamil
D. Furosemide
E. Hydralazine

Ans. A

27) Which drug is most appropriate for inferior MI with HR = 40 bpm?
A. Atropine
B. Digoxin
C. Propranolol
D. CCBs
E. Heparin

Ans. A

28) All of the following are early complications of acute MI EXCEPT:
A. Cardiogenic shock
B. Heart block
C. Ventricular fibrillation
D. Aneurysmal dilation of infarcted area
E. Sudden cardiac death

Ans. D

29) Leading cause of early death in acute MI patients is:
A. Rupture of myocardial wall
B. Rupture of septum
C. Rupture of chordae tendineae
D. Ventricular arrhythmias
E. Ventricular aneurysm

Ans. D

30) Which of the following is associated with ST elevation on ECG?
A. Right ventricular hypertrophy
B. Left ventricular hypertrophy
C. Digoxin effect
D. Subendocardial infarction
E. Early repolarization after angina attack

Ans. E

31) Xanthelasma (yellowish skin lesion) is associated with:
A. Rheumatic heart disease
B. Hypertension
C. Hyperlipidemia
D. Myocardial infarction
E. Scar after trauma

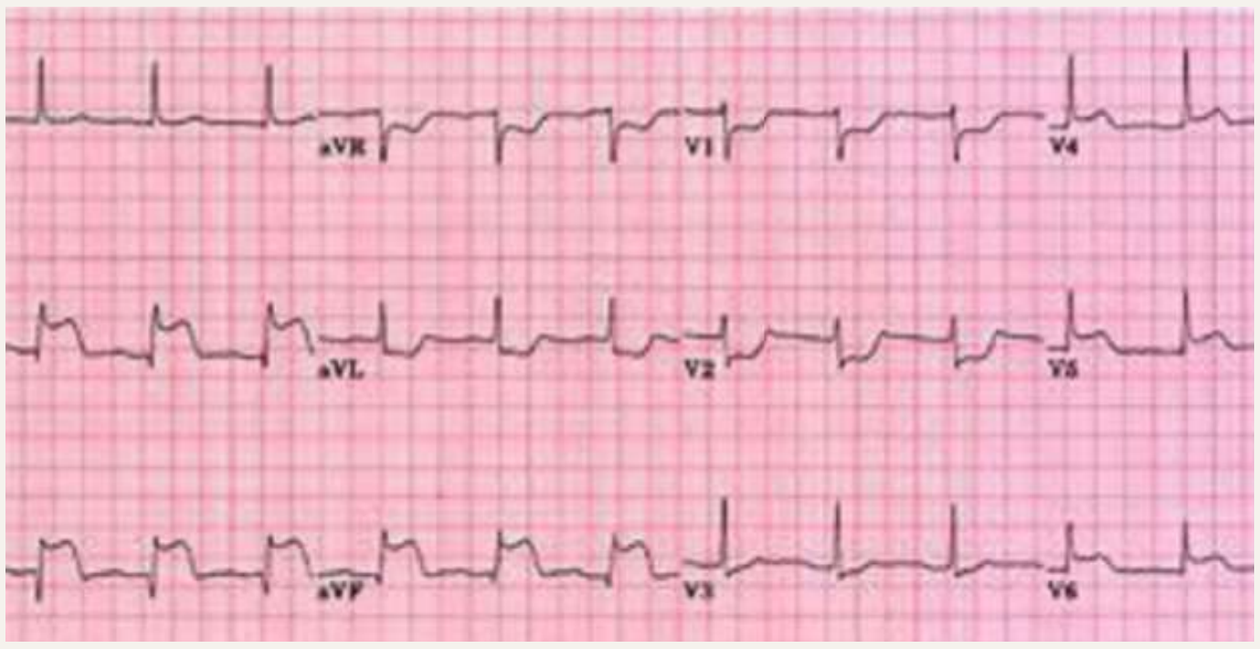
Ans. C

ISCHEMIC HEART DISEASE

Myocardial infraction

Mini OSCE

Case 2: 50 years old male presented with chest pain and sweating, ECG is done to the patient, what is the diagnosis:
1- Inferior MI
2- Anteroseptal MI
3- Hypertrophic cardiomyopathy
4- Posterior MI
Ans.1

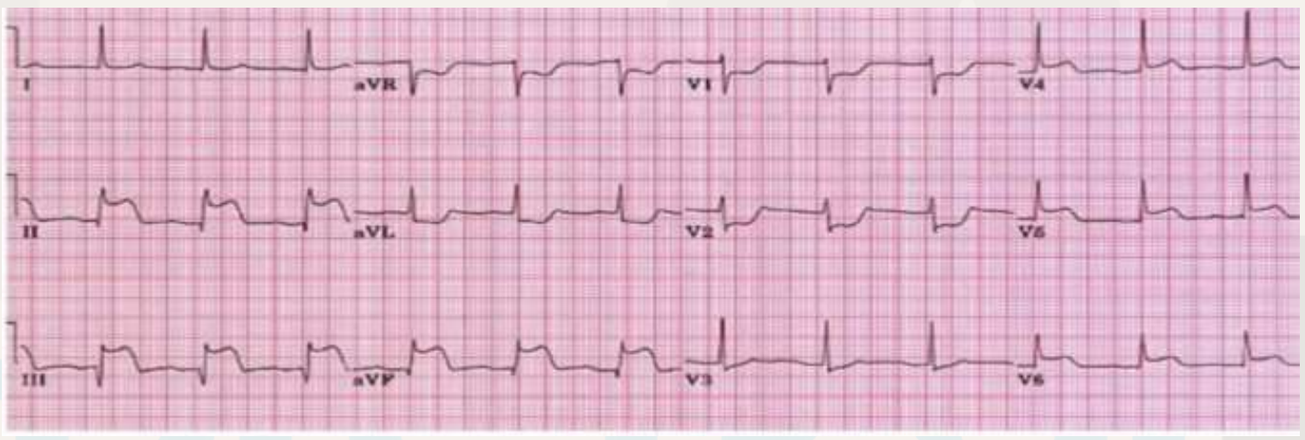


#Which of the following isn't immediate measure:
1. **Aspirin 300mg**
2. **LMWH**
3. **B-blocker**
4. **Thrombolytic therapy**
5. **PCI**

Ans.3

A 60 years old patient present with chest pain and sweating for 1 hour duration

Q1 \ what is the diagnosis?
Inferior MI

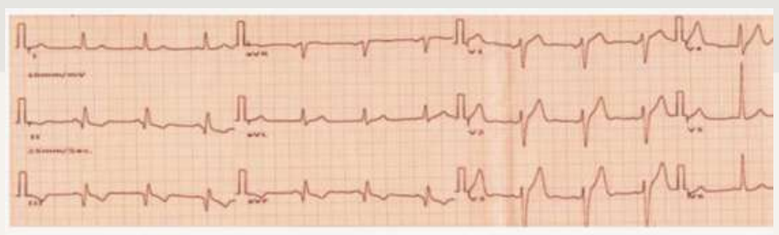


Q2 \ what are the treatment of choice?
1- MONA: morphine, O2, nitrate, aspirin
لا تحطوا ال nitrate اذا كان عنده hypotension
2- Catheterization or thrombolytics
بس كونه تعدى من 90 دقيقة نعطي cath thrombolytics

Q3 \ after 5 days the patient present with shortness of breath and hypotension and when auscultate there is normal breath sounds, what is the diagnosis and what is the treatment?
Pericarditis as a complication of MI and the treatment is pericardiocentesis

Q7 - This 53 year old male had a myocardial infarction 1 month ago, which of the following is best assessed in follow up for secondary prevention?
a. LDL level
b. Total cholesterol
c. HDL level
d. Free fatty acids
e. Triglycerides

Ans. a - LDL level



Pathological Q waves
seen in Old MI
(ECG from Google)

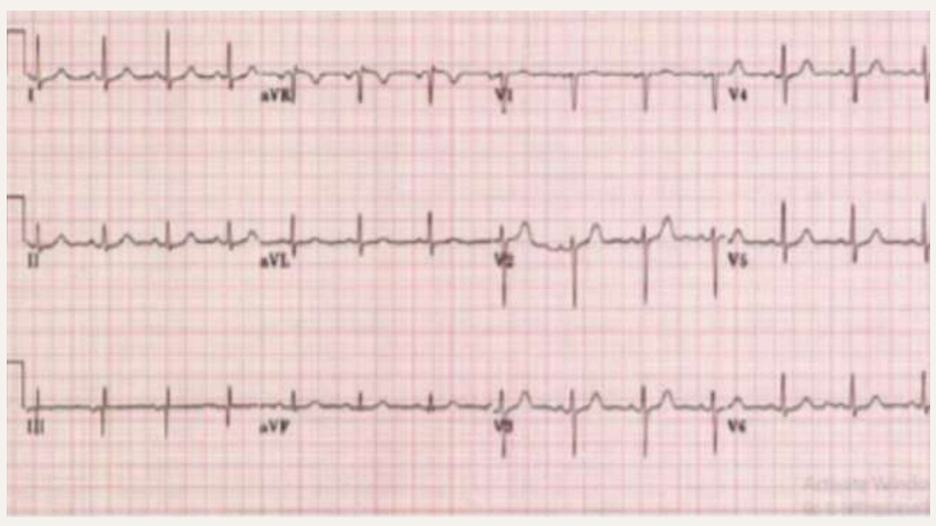
Q14

Station 12

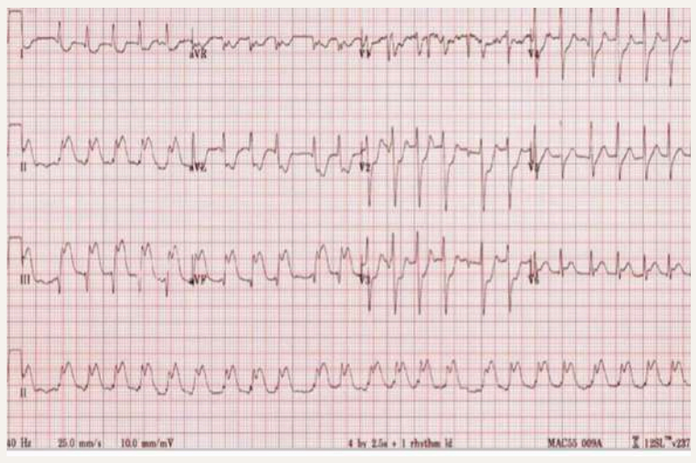
- **Describe the ECG? : ST depression in leads V5–V6**

,T wave inversion in V5–V6 and possibly aVL
Suggestive of lateral ischemia,No pathological Q waves.

- **What is your diagnosis?**
- **Ans. Non-STEMI**
- **What is the treatment?**
- **Ans. aspirin, heparin, beta blockers, oxygen, ACE inhibitors**



Q9 - A 51 year old male diabetic patient is admitted through the emergency department with chest pain of 1 hour duration, one of the following is not indicated acutely?
a. Thrombolysis
b. Aspirin
c. Morphine
d. ACE inhibitors
e. Cardiac catheterization
Ans. d - ACE inhibitors



HEARTFAILUR

Elderly came with HF , what drug deteriorate her condition :

pioglitazone

- **drug improve mortality rate in HF :**

Enalapril

Enalapril is ACEIs

- **Drugs that affect mortality in HF except :**

(frusemide**)**

- **The following drugs improve prognosis of patients with heart failure, except:**

A. Metoprolol

B. ACEI

C. Statin

D. Fruosmide

E. Aldosterone antagonist

Ans: (c)

- **Compensatory physiologic changes in HF include which one of the following:**

A. Thyrotoxicosis

B.Infection and infective endocarditis,

C. poor compliance in therapy

D.renin angiotensin system,

E.pregnancy ???

Question not clear Probably answer is Renin- angiotensin-system.

- **In heart failure, the following statements are true except:**

Select one:

a. About 10% of population worldwide suffer from heart failure after the age of 70 years.

b. Stage D heart failure requires specialized treatment strategies.

c. 60% of patients with NYHA class 3 die because of sudden death.

d. The most common cause of CHF is ischemic heart disease.

e. Important compensatory mechanism is sympathetic riervous system inhibition

Ans:(E)

- **Wrong about Heart failure :**

BNP secrets only in heart failure??

65year-old female with a known history of heart failure presents for an annual check-up. She is found to have a blood pressure of 170/100 mmHg. Her current medications are furosemide and aspirin. What is the most appropriate medication to add?

a. Bendroflumethiazide

b. Spironolactone

c. Bisoprolol

d. Verapamil

e. Enalapril

Anas : (e)

HEARTFAILUR

• One of the following metabolic and neurohormonal effect is seen in patients with congestive heart failure: Select one:

a. Compensatory reduction in basal metabolic rate

b. Increased in circulating rennin concentration

c. Increased responsiveness of the heart to circulate catecholamines

d. Polycythemia

e. Increased oxygen carrying capacity of the blood

Ans:(B)

A 50 year old woman presents with pleuritic chest pain and breathlessness thatbecome graduallyworse over a few weeks After physical examination and chest x-ray, she isfound to have a large left sided pleuraleffusion. Which of the following diseasesis LEAST likely to cause this type of pleural effusion 2

a. Community acquired pneumonia

b. Pulmonary embolism

c. Left sided heart failure

d. Branchogenic carcinoma

e Pulmonary tuberculosis

Ans:(c)

• congestive heart failure includes all of the following except ?

a. Jugular venous distention

b. S3

c. Inspiratory rales

d. Enlarged liver

e. Splenomegally•

Ans:(e)

Which of the following is not an aggravating factor of congestive heart failure?

a. Hypertension

b. Thyrotoxicosis

c. Alcohol

d. Inactivity

e. Arrhythmia

Ans:(d)

• In ASD the second heart sound is best described by the following:

a- Splitted and fixed during respiration

b-Splited and moves with respiration

c-Paradoxical splitting

d-ecrease in the intensity of the second heart sound

e-Increase in the intensity of the heart sound

Ans:(a)

• Pathophysilogical abnormalities in heart failure include all of the following except

a) Reduced myocyte shortening and wall motion

b) Sodium retention and circulatory congestion

c) Systemic vasodilation that increase impedence of the LV ejection

d) Structural remodelling and dilation of the LV

e) Renin-Angiotensin-Aldosterone activation

Ans:(c)

HEARTFAILUR

All the following are found in left sided heart failure Except.
a- bilateral basal creptations
b- third heart sound
c- pulsus alternans
d- raised JVP
e- pulmonary oedema

Ans:(d)

• A pleural effusion analysis results: ratio of concentration of total protein in pleural fluid to serum of 0. 38 , lactate dehydrogenase LDH level of 125 IU, and ratio of LDH in pleural fluid to serum of 0. 45. Which of the following ONE disease is the most likely cause for this pleural effusion.
a- uremia
b- pulmonary embolism
c- sarcoidosis
d- SLE
e- Congestive heart failure

Ans:(e)

• All the following drugs reduce mortality in patient with congestive heart failure except:
a Angiotensin receptor blockers
b ACE inhibitors
c B blocker
d Loop diuretic
e Spinono lactone

Ans:(d)

• Not used in acute left ventricular failure:
a. Dipyridamole
b. Mechanical ventilation
c. Dobutatmine
d. Diuretics

Ans:(a)

Edema, ascites , enlarged liver and venous pressure of 180mm. of saline suggest:
A. Laennec's cirrhosis
B. Congestive heart failure
C. Interior vena caval obstruction
D. Acute glomerulonephritis
E. Cirrhosis of the live

Ans:(b)

HEART FAILURE

• 70-year-old woman is referred to hospital due to evidence of congestive heart failure. Blood test reveal the following:
Hb 7.4 g/dl, MCV 124 fl, platelets 98 x10 9/l, WBC 3X10 9/L,
All the following investigations are required to reach a diagnosis Except.
a. Schilling test
b. Intrensic factor antibodies
c. antiparitel cell antibodies
d. bone marrow aspiration, looking for megaloblasts
e. C-reactive protein.

Ans:(e)

• All the following drugs are used in treatment of congestive heart failure Except.
a- bisoprolol
b- metaprolol
c- carvidolol
d- spironolactone
e- propranolol

Ans:(e)

• patient with mild congestive heart failure is treated with high-dose furosemide and diureses 25 pounds of fluid. A complete blood count (CBC) taken before the diuresis shows an RBC count of 4 million/mm3; a CBC taken after diuresis shows a RBC count of 7 million/mm3. Which of the ONE of the following is the most likely explanation?
a- Cyanotic heart disease
b- Increased erythropoietin
c- Polycythemia vera
d- Relative polycythemia
e- Renal cell carcinoma

Ans:(d)

• All of the following are causes of exudative pleural effusion except:
A) Malignancy
B) Trauma
C) Collagen vascular disease
D) Infection
E) Congestive heart failure.

Ans:(e)

. In conductive system of the heart muscle, all of the following are ture, except:
a-Conduction started in SA node. AV node, bundle of His, left and right bundle branch- purkinjee fibers.
b-Left bundle branch is shorter than right bundle
c-Right bundle supplies right ventricle and left bundle supplied left ventricle and septum
d-Action potential in the ventricle is rapid and generated by rapid transmembrane K diffusion

Ans:(d)

HEART FAILURE

all the following is true about heart failure except :-

a-patient should avoid high salt food

b-ACEI can be used in treatment

c-sever anemia can causes heart failure

d-right side heart failure causes pulmonary edema xxx

e-hyponatremia can occur

Ans:(d)

• All of the following are recognized to precipitate heart failure EXCEPT :

a-High dietary salt intake, such as mansaf

b-Pneumonia

c-Non-steroidal anti-inflammatory drugs (NSAIDs) use

d-Acute cardiac ischemia

e-Increased water intake

Ans:(e)

Q2 : Regarding CXR :

-ALL of the following cause exudative Pleural effusion , Except ?

A. Heart Failure

b. Pneumonia

c. Mesothelioma

d. TB

Ans:(a)

***According to the light's criteria , which of the following +ve with exudative ?**

Pleural fluid to the serum total protein > .5

RHEUMATIC FEVER

true about acute rheumatic fever?
Aspirin is used for arthritis

Major manifestations of acute rheumatic fever include all of the following except?
a. Arthralgia
b. Subcutaneous nodules
c. Carditis
d. Chorea
E. Erythema marginatum.

Answer : a

- **the causative organism in rheumatic fever is?**

a. Echo virus
b. B-Haemolytic Streptococcus group A
c. Streptococcus viridians
d. E.colie.
e. Staph aureus.

Answer : b

- **Which of the following statements concerning acute rheumatic fever is true? Select one:**

a) Migratory polyarthritis occurs in 10% of patients
b) Sydenham's chorea typically occurs early in the course of the disease
c) Erythema marginatum is a common finding , occurring in 50% of cases
d) Secondary prophylaxis should be initiated in order to decrease recurrent episodes of rheumatic fever
e) Group A streptococci can usually be recovered in the upper respiratory tract of patients with rheumatic fever

answer : d

- **Major criteria for Rheumatic fever include all the following Except.**

a- carditis
b- Sydenham's chorea
c- Polyarthralgia
d- Erythema marginatum
e-Subcutaneous nodules.

Answer : c

- **pt. with prev. hx of rheumatic heart disease history but with new murmur what's the cause?strep. Viridins**

RHEUMATIC FEVER

Organism responsible for rheumatic fever is:

a-streptococcus pyogens

b-mycoplasm.

c- streptococcusviridians

d- B heamolytic streptococcus

e-staphylococcus aures

Answer : a+d

young female with left ankle and knee swelling and hx of sore throat ?

rheumatic fever

CARDIOMYOPATHY

One is presentation of hypertrophic cardiomyopathy :
sudden death

• **In dilated cardiomyopathy one of the following is true:**
Select one:
a. Pathologically in DCMP the left ventricle is dilated with significant fibrosis and normal weight.
b. Recovery from DCMP with treatment is common.
c. Peripartum CMP always carries poor prognosis.
d. Endomyocardial biopsy is sensitive and specific for diagnosis.
e. LBBB is a common finding in DCMP

Ans:(e)

• **In the management of dilated cardiomyopathy all are true except ?**
a. Salt and water retention
b. ACE inhibitors
c. Diuretics
d. Beta blockers
e. Complete bed rest

Ans:(e)

• **True about hypertrophic sub-arotic stenosis:**
A. A type of dilated cardiomyopathy
B. Nitrates are used in treatment
C. A cause of death in athletics

Ans:(C)

• **Classification of cardiomyopathy include all of the following, except:**
a. Dilated cardiomyopathy
b. Hypertrophic-IHSS
c. Restrictive cardiomyopathy
d. Arrhythmogenic right ventricle
e. Prolpased mitral valve

Ans:(e)

- Young male with HOCM, which of the following drugs should be avoided?
A) ACE inhibitor
B) Atenolol
C) Amiodarone
D) Verapamil

Ans:(D)

PERICARDIAL DISEASE

1. A 36 **year old female has been unwell for several days with a viral illness . she then developed chest pain and shortness of breath . on examination she is hypotensive and tachycarid . there is bilateral crackles . an ecg reveals non specific st-t changes and bloods revealed raised inflammatory markers and a raised troponin I . echo reveals dilated and hypokinetic chambers . what is the most likely diagnosis ?**

a- Myocarditis
b- Pericarditis
c- Infective endocarditis
d- STEMI
e- Acute mitral regurgitation

answer:a ;

2.**one of the following is not cause of pericarditis ?**

a- TB
b- SLE
c- Lymphoma
d- COPD
e- Uremia

answer:d:

3. **In pericarditis the characteristic EKG changes ;**

A:T wave inversion*
B; ST segment depression
C; Atrial fibrillation
D;ST segment elevation convex upwards
E; ST segment elevation with concave upwards

answer: e

4. **30 year old male patient, presented with chest pain one week after an URTI, most likely diagnosis:**

a. Pericarditis
b. Tension pneumothorax

answer:a:

5.**In pericarditis, one is false:**

a. T inversion occurs after the J point returns to isoelectric line
b. Elevated troponins imply worse px
c. Raised JVP in SLE patient : constrective pericarditis

answer:c

6. **In pericarditis, all are true, except:**

A. Chest pain increase by deep breating
b. usually follow URI'
C. on EKG, ST segment elevation is convex upwards
D. pericardial rub can confirm diagnosis
E. treated with NSIAD or aspirin

answer:c

7. **Specific EKG changes of acute pericarditis one is true:**

a-presence of Q wave
b-atrial fibrillation
c-sinus bradycardia
d-sinus tachycardia
e- elevation of ST segment is concave upwards

answer:e

8, **Pulsus paradoxus can be described by which of the following statements?**

a. Pulsus paradoxus can be seen in patients with acute asthma exacerbations in which the negative intrathoracic pressure decreases afterload of the heart with a resultant increase in systolic pressure during inspiration.
b. Pulsus paradoxus has not been described in patients with superior vena cava syndrome.
c. Pulsus paradoxus describes the finding of diminished pulses during inspiration, when the peripheral pulse is normally augmented durin. inspiration.
d. A drop in systolic pressure during inspiration of more than 5 mmHg indicates the presence of pulsus paradoxus.

answer:e

PERICARDIAL DISEASE

9.cardiac tamponade : increase in JVP Pulsus paradoxus pulse is felt in ONE of the following.

a- aortic regurgitation
b- aortic stenosis
c- mitral stenosis
d- VSD
e. Cardiac tamponade •

answer:e

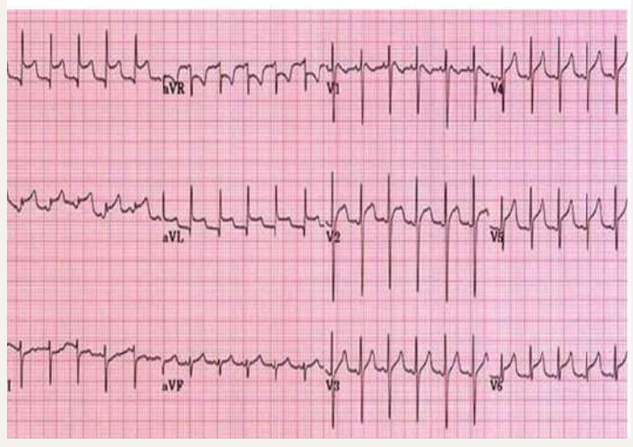
10. All the following may occur in cardiac tamponade Except.

a- raised jugular venous pressure with sharp rise and y descent.
b- Kussmaul's sign (rise JVP/ increased neck vein distension during inspiration)
C.pulses paradoxus
d. Visible apex beat
e.reduced cardiac output

answer:d

PERICARDIAL DISEASE

MINI OSCE



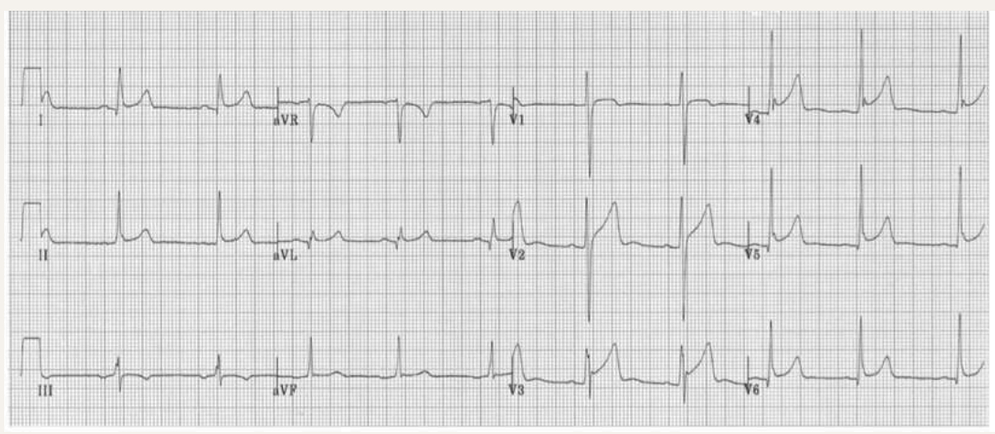
1.the cause of this ECG?

- Atherosclerosis
- Coronary occlusion
- Viral infection

Ans : c

2.patient came with chest pain and flulike symptoms. What is the most likely diagnosis:

- Inferior MI
- Pericarditis
- Atrial fibrillation



Ans:b

2.patient came with chest pain and flulike symptoms. What is the most likely diagnosis:

- Inferior MI
- Pericarditis
- Atrial fibrillation

Ans:c

Station

A.What is your diagnosis?

Acute pericarditis

B.List three causes for this condition?

Idiopathic - infectious - acute MI

c.Investigation to confirm your diagnosis?

ECG, Echocardiogram

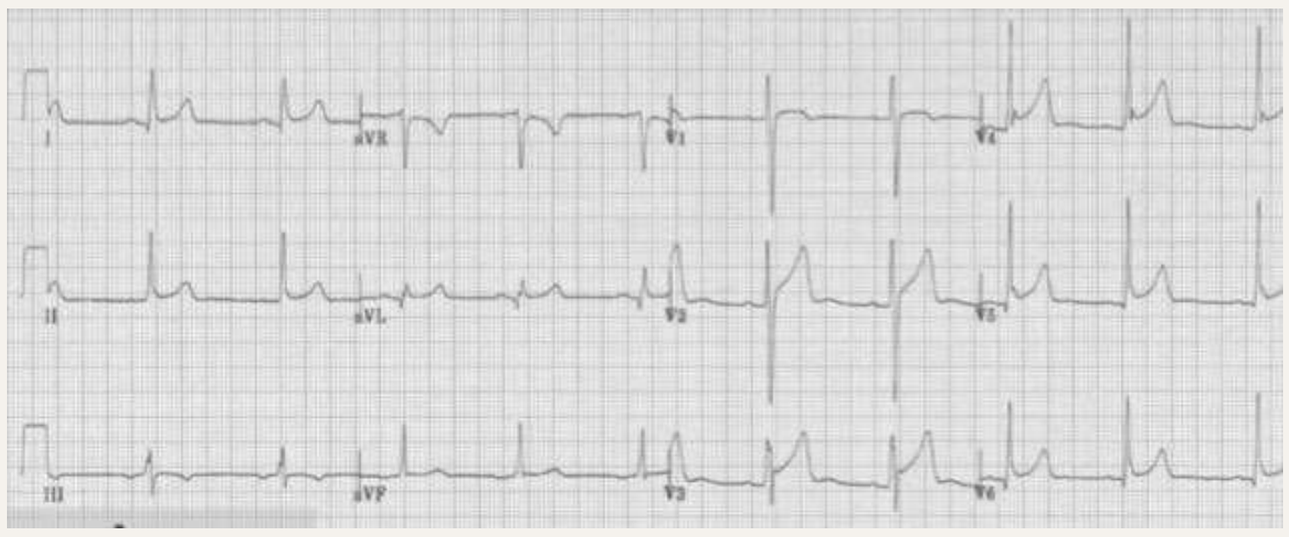
d.What is the treatment?

NSAIDs-glucocorticoids-colchicine - treat underlying cause

Station

1)your diagnosis

-pericarditis



2) mention 3 causes for this condition :

uremia ,post MI,Radiation, Idiopathic

3)confirm your diagnosis by?

Echo

4)Line of treatment ?

uremia -> dialysis

post MI-> colchicine + aspirin

gnothér causes > colchicine + high dose of nsaid

VALVULAR HEART DISEASE

1. A patient with previous history of rheumatic heart disease presents with a new murmur. What is the most likely cause?

- a. Staphylococcus aureus
- b. Streptococcus viridans
- c. Group B Streptococcus
- d. Streptococcus pneumoniae

Correct answer: b. Streptococcus viridans

2. Which of the following is NOT a correct description of the physiological cause of a heart murmur?

- a. Turbulent blood flow
- b. Increased blood flow through a normal valve
- c. Increased blood flow through an abnormal valve
- d. Occurs in pregnancy and athletes

Correct answer: None – all are physiological causes
(So, if the question says "except," then: No correct answer listed unless e. "All of the above" was omitted)

3. Heart sounds are generated by which of the following?

- a. Opening of the valve
- b. Closing of the valve
- c. Partially opening of the valve
- d. Partially closing of the valve
- e. The valve is in the mid position

Correct answer: b. Closing of the valve

4. Harsh systolic crescendo-decrescendo murmur, with low pulse pressure, is most likely associated with:

- a. Mitral stenosis
- b. Tricuspid regurgitation
- c. Mitral regurgitation
- d. Aortic stenosis
- e. Aortic regurgitation

Correct answer: d. Aortic stenosis

5. What is the causative organism in rheumatic fever?

- a. Echovirus
- b. Group A β-Hemolytic Streptococcus
- c. Streptococcus viridans
- d. Escherichia coli
- e. Staphylococcus aureus

Correct answer: b. Group A β-Hemolytic Streptococcus

VALVULAR HEART DISEASE

6. A 72-year-old woman is evaluated in the hospital for a 3-month history of increasing shortness of breath. Although she had previously been physically active, her ambulation is now limited to about 50 feet. Her medical history includes rheumatic fever, diverticulosis with GI bleeding, hypertension, and hyperlipidemia. Medications include chlorthalidone and atorvastatin. On physical examination: BP 140/70 mmHg, HR 83 bpm, RR 16/min, SpO2 98%. No JVD or edema. Lungs clear. A 3/6 apical holosystolic murmur radiating to the axilla is heard. ECG shows normal sinus rhythm with left atrial enlargement. Echo reveals severe eccentric mitral regurgitation with calcification of valve leaflets and normal LV systolic function. Which of the following is the most appropriate treatment?

- **a. Bioprosthetic mitral valve replacement**
- **b. Mechanical mitral valve replacement**
- **c. Oral vasodilator therapy**
- **d. Percutaneous mitral valvuloplasty**
- **e. Review in 1 year**

Correct answer: b. Mechanical mitral valve replacement

7. A 50-year-old man was found to have a heart murmur. BP in the right arm is 160/100 and in the right leg is 120/80. Chest X-ray showed rib notching in the upper ribs. What's the likely diagnosis?

- **a. Coarctation of the aorta**
- **b. Supravalvular aortic stenosis**

Correct answer: a. Coarctation of the aorta

8. In systolic murmurs, which of the following is true?

- **a. Murmur occurs between S1 and S2**
- **b. Murmur occurs after S2**
- **c. Murmur occurs before S1**
- **d. Aortic stenosis is a diastolic murmur**
- **e. Murmur of mitral stenosis is a systolic murmur**

Correct answer: a. Murmur occurs between S1 and S2

9. A 64-year-old man presents with a 6-week history of intermittent red-colored urine and fatigue. He has a history of hypertension, mechanical mitral valve replacement, and nephrolithiasis. Medications: amlodipine, warfarin, aspirin. Vitals: T 37.6°C, BP 112/72 mmHg, HR 98 bpm, BMI 30. On exam: metallic click with grade 2/6 systolic murmur, no CVA tenderness. Urinalysis: 3+ blood, 1+ protein, no WBCs or nitrites. Microscopy: no cells or casts, but calcium oxalate crystals seen. What is the most likely cause?

- **a. Bladder cancer**
- **b. Glomerulonephritis**
- **c. Hemoglobinuria**
- **d. Rhabdomyolysis**
- **e. Nephrolithiasis**

Answer: C

This patient most likely has hemoglobinuria, possibly due to intravascular hemolysis from his mechanical mitral valve, whose dysfunction is suggested by the finding of mitral regurgitation on physical examination. Fragmentation hemolysis in this setting manitests as a microangiopathic hemolytic anemia with thrombocytopenia and is accompanied by the release of free hemoglobin into the circulation. Free hemoglobin is partially bound by haptoglobin but may also be filtered into the urine, producing a red color. Heme reacts with peroxidase in the urine dipstick, causing a false-positive result for blood. Hemoglobinuria is distinguished from true hematuria by the absence of erythrocytes on urine microscopy. Similar findings on urinalysis will also occur with the release of myoglobin into the circulation, usually from muscle injury (rhabdomyolysis). Myoglobin is a small molecule relative to hemoglobin, is not bound within the circulation by haptoglobin, and is readily filtered through the kidneys, resulting in red-colored urine. It also reacts with peroxidase in the urine dipstick indicating blood, although microscopic examination will also be negative for erythrocytes. Bladder cancer is a concern in a patient with a significant smoking history presenting with a finding of red urine. However, the urine color change in bladder cancer is due to bleeding into the urinary tract, and erythrocytes would be seen on urinalysis. Glomerulonephritis may be associated with bleeding into the urine and would be suspected if erythrocy tes, particularly acanthocytes (dysmorphic erythrocytes), were found on urine microscopic examination. Proteinuria may also be found in glomerulonephritis, although this patient' proteinuria is relatively mild and may result from tubular damage caused by hemoglobin toxicity. Nephrolithiasis often presents with true hematuria in association with acute flank pain radiating to the ipsilateral groin, with o without costovertebral angle tenderness. Despite his history of nephrolithiasis, this patient does not have suggestive clinical symptoms and has no evidence of erythrocytes on urinalysis, making this an unlikely diagnosis.

Hemoglobinuria is distinguished from true hematuria by the absence of erythrocytes on urine microscopy

Correct answer: • c. Hemoglobinuria

VALVULAR HEART DISEASE

10. A 42-year-old woman was diagnosed with a ventricular septal defect (VSD) at 6 months old. She is asymptomatic and taking no medications. On exam: BP 100/60 mmHg, HR 70 bpm, RR 15, BMI 28. Normal apical impulse. Loud holosystolic murmur at left lower sternal border. Echo: small membranous VSD with left-to-right shunt. Normal LV size and EF 60%. Normal pulmonary pressure. What is the most appropriate management?

- a. Cardiac catheterization
- b. Cardiac magnetic resonance (CMR) imaging
- c. Endocarditis prophylaxis
- d. Follow-up in 3 to 5 years
- e. Stress testing

Correct answer: d. Follow-up in 3 to 5 years

11. In aortic stenosis, all are true except:

- a. Symptoms occur when aortic valve area is ⩽ 1 cm^2.
- b. Pressure gradient decreases when LV systolic function declines.
- c. Grade 5/6 systolic murmur indicates severe disease.
- d. The onset of angina indicates poor prognosis.
- e. LV ejection fraction < 50% is class 1 indication for AVR.

Answer: e. / C ?! .

12. All are true in Aortic stenosis except?

- a. Murmur is ejection systolic
- b. Transmitted to the carotid
- c. Second heart sound is diminished in intensity
- d. Presence of sustained apex
- e. Presence of right ventricular heave

Answer: e. Presence of right ventricular heave.

13. Impaired coronary flow reserve is associated with each of the following conditions except?

- a. Severe aortic stenosis
- b. Severe systemic hypertension with left ventricular hypertrophy
- c. Severe mitral stenosis in the presence of atrial fibrillation
- d. A totally occluded coronary artery but with excellent collateral supply from the contralateral coronary artery
- e. An isolated 30% diameter stenosis of a coronary artery

Answer: e. An isolated 30% diameter stenosis of a coronary artery.

VALVULAR HEART DISEASE

14. Female with syncopal attacks and murmur radiating to the carotids

Answer: Aortic stenosis.

15. In idiopathic hypertrophic subaortic stenosis (IHSS), one is true:

- **a. It is a type of dilated cardiomyopathy**
- **b. An important cause of sudden death in athletes**
- **c. Left ventricle is dilated**
- **d. Pulse examination is normal in character**
- **e. Need nitrate for treatment**

Answer: b. An important cause of sudden death in athletes.

16. In idiopathic hypertrophic subaortic stenosis (IHSS), which is now more commonly known as hypertrophic cardiomyopathy (HOCM):

Answer: Aortic stenosis poor prognosis: congestive heart failure.

17. Which of the following is LEAST likely to cause hemoptysis?

- **a. Tuberculosis**
- **b. Acute bronchitis**
- **c. Pulmonary embolism**
- **d. Bronchogenic carcinoma**
- **e. Aortic stenosis**

Answer: e. Aortic stenosis.

18. Diastolic murmurs occur in all the following except:

- **a. Mitral stenosis**
- **b. Aortic stenosis**
- **c. Tricuspid stenosis**
- **d. Aortic regurgitation**
- **e. Pulmonary regurgitation**

Answer: b. Aortic stenosis.

19. Systolic murmurs occur in all of the following except:

- **a. Aortic stenosis**
- **b. Pulmonary stenosis**
- **c. Mitral stenosis**
- **d. Mitral regurgitation**
- **e. Aortic regurgitation**

Answer: c. + e.

VALVULAR HEART DISEASE

20. Signs and symptoms of severe aortic stenosis all are true except:

- a. Angina pectoris
- b. Syncope
- c. Heart failure
- d. Murmur transmitted to the carotid
- e. Double apical impulse

Answer: e. Double apical impulse.

21. In Aortic stenosis, all are true except:

- a. The most common congenital anomaly is bicuspid aortic valve, which is about 1-2%.
- b. US guidelines do not recommend balloon valvuloplasty in adults because of the high risk of complications >10%.
- c. Patients with low cardiac output usually have a small aortic area and small gradient; this can be distinguished by doing Dobutamine stimulation.
- d. Degenerative aortic sclerosis is distinguished from aortic stenosis by valve thickening and calcification without obstruction of a significant gradient.
- e. In US guidelines, severe stenosis valve area is 1-1.5 cm^2, and the mean gradient is 25-40 mmHg.

Answer: e. In US guidelines, severe stenosis valve area is 1-1.5 cm^2, and the mean gradient is 25-40 mmHg.

22. Diastolic murmurs are all true except:

- a. Occurs after the S2
- b. It is divided into an early, mid, and late diastolic murmur
- c. The murmur of tricuspid regurgitation is a diastolic murmur
- d. In aortic regurgitation, the murmur is called early diastolic
- e. Murmur of mitral stenosis is a diastolic murmur

Answer: c. The murmur of tricuspid regurgitation is a diastolic murmur.

23. The following statements are true regarding HOCM except:

- a. Non-dilated LV with systolic anterior motion of the mitral valve
- b. Tachyarrhythmias are well tolerated in HOCM
- c. Ischemic chest pain in HOCM is multifactorial
- d. Patients with HOCM are usually asymptomatic
- e. Beta-blockers are important in the management of HOCM

Answer: b. Tachyarrhythmias are well tolerated in HOCM.

📌24. All increase murmur in HOCM except:

- a. Valsalva
- b. Standing
- c. Squatting
- d. Exercise
- e. Nitrate

Answer: C.

VALVULAR HEART DISEASE

📌25. In mitral regurgitation, all of the following are true except:

- a. Mild MR is seen in 80% of the normal population.
- b. The commonest cause of acute MR is acute MI.
- c. Tachycardia in acute MR is harmful and beta-blockers should be used to improve prognosis.
- d. Myxomatous degeneration is the commonest cause for chronic MR.
- e. Both right atrium and left atrium are dilated in chronic MR.

Answer: c. Tachycardia in acute MR is harmful and beta-blockers should be used to improve prognosis.

26. All are true in mitral regurgitation except:

- a. Pansystolic murmur at the apical area
- b. Transmitted to axilla
- c. The murmur may be short ESM
- d. Apex is deviated laterally and downwards
- e. Is common in dilated cardiomyopathy

Answer: c. The murmur may be short ESM.

27. In mitral stenosis, one of the following is true:

- a. The commonest cause is mitral annular calcification.
- b. Left ventricular dilatation indicates severe disease.
- c. Hemoptysis indicates pulmonary hypertension.
- d. Longer S2 to opening snap interval indicates severe MS.
- e. Cardiac catheterization is the gold standard for diagnosis.

Answer: c. Hemoptysis indicates pulmonary hypertension.

📌28. A 66-year-old man has a history of ischemic cardiomyopathy. He undergoes right and left heart catheterization for evaluation of unexplained dyspnea on exertion and an equivocal result on noninvasive cardiac stress testing. What abnormality is demonstrated in the pulmonary capillary wedge tracing?

- a. Aortic stenosis
- b. Congestive heart failure
- c. Mitral regurgitation
- d. Mitral stenosis
- e. Pulmonary arterial hypertension

Answer: b. Congestive heart failure.

VALVULAR HEART DISEASE

29. A 27-year-old woman suffers from mitral stenosis and develops atrial fibrillation. She is placed on warfarin treatment. What is the most appropriate target INR range?

- a. Less than 1.0
- b. 1.0 – 2.0
- c. 2.0 – 3.0
- d. 3.0 – 4.0
- e. More than 5.0

Answer: c. 2.0 – 3.0.

30. True regarding mitral stenosis:

- Hemoptysis is due to pulmonary hypertension.

Answer: True.

31. Wrong about mitral stenosis:

- a. Atrial fibrillation is associated with presystolic accentuation of the murmur
- b. The later the opening snap, the less severe the stenosis

Answer: a. Atrial fibrillation is associated with presystolic accentuation of the murmur.

32. What is wrong about mitral stenosis:

- a. Causes a pansystolic murmur
- b. Causes a mid-diastolic murmur
- c. Most cases are secondary to rheumatic fever.
- d. May lead to pulmonary congestion

Answer: a. Causes a pansystolic murmur.

33. A 30-year-old man has, on heart auscultation, a loud first heart sound, rumbling mid-diastolic murmur with an opening snap. One of the following is the most likely diagnosis:

- a. Pliable (mobile) mitral valve stenosis.
- b. (Immobile) mitral valve stenosis.
- c. Mitral valve prolapse.
- d. Aortic regurgitation.
- e. Mitral regurgitation.

Answer: a. Pliable (mobile) mitral valve stenosis.

34. You are examining a 63-year-old man. You hear a blowing diastolic murmur at the right upper sternal border. What is the probable diagnosis?

- a. Mitral stenosis
- b. Mitral regurgitation
- c. Aortic stenosis
- d. Aortic regurgitation
- e. Tricuspid regurgitation

Answer: d. Aortic regurgitation.

VALVULAR HEART DISEASE

35. Patient with early diastolic murmur at left sternal area with high volume pulse (water hammer pulse):

Answer: Aortic regurgitation

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36) In aortic stenosis, all are true except:

- **a) Symptoms occur when aortic valve area is ⩽ 1 cm^2.**
- **b) Pressure gradient decreases when LV systolic function declines.**
- **c) Grade 5/6 systolic murmur indicates severe disease.**
- **d) The onset of angina indicates poor prognosis.**
- **e) LV ejection fraction < 50% is class 1 indication for AVR.**

ANSWER: B. PRESSURE GRADIENT DECREASES WHEN LV SYSTOLIC FUNCTION DECLINES.

37) IV drug endocarditis: Staph in tricuspid valve. Which of the following is true?

- **a) Staphylococcus aureus is the most common pathogen.**
- **b) Tricuspid valve involvement is more common in IV drug users.**
- **c) The tricuspid valve murmur is typically systolic.**
- **d) Both b and c are correct.**
- **e) Staphylococcus epidermidis is the most common pathogen in this condition.**

Answer: a. d are correct.

38) A 54-year-old male presents with dyspnea, large pulse volume, and a diastolic murmur in the left 3rd intercostal space. What is the most likely diagnosis?

- **a) Aortic regurgitation**
- **b) Mitral regurgitation**
- **c) Tricuspid regurgitation**
- **d) Pulmonary hypertension**
- **e) Aortic stenosis**

Answer: a. Aortic regurgitation.

39) Incorrectly matched pairs (regarding murmurs):

- **a) Pulmonary stenosis ... systolic**
- **b) Pulmonary regurgitation ... diastolic**
- **c) Aortic stenosis ... diastolic**
- **d) Mitral stenosis ... diastolic**
- **e) Tricuspid regurgitation ... systolic**

Answer: c. Aortic stenosis ... diastolic

40) which involve resemble mitral valve closure in ECG?

A- P interval

B- QRS

Answer: B

VULVULAR HEART DISEASE

42) Early diastolic murmur?
A – Aortic stenosis
B – mitral stenosis
C – Aortic regurgitation

Answer: C

43) increase s2 sound
A – mitral stenosis
B – aortic regurgitation

Answer: B

44) 50 years old male has aortic stenosis, what is the most likely cause of this murmur
a. Bicuspid aortic valve
b. early diastolic murmur
c. Aortic regurgitation
d. celiac disease

answer: A

45) The best description of the physiological cause of a heart murmur is:
- **a) Turbulent blood flow**
- **b) Increased blood flow through a normal valve**
- **c) Increased blood flow through an abnormal valve**
- **d) Occurs in pregnancy and athletes**
- **e) All of the above**

Answer: e. All of the above.

46) Diastolic murmurs are all true except:
- **a) Occurs after the S2**
- **b) It is divided into early, mid, and late diastolic murmurs**
- **c) The murmur of tricuspid regurgitation is a diastolic murmur**
- **d) In aortic regurgitation, the murmur is called early diastolic**
- **e) Murmur of mitral stenosis is a diastolic murmur**

Answer: c. The murmur of tricuspid regurgitation is a diastolic murmur.

VULVULAR HEART DISEASE

47) In evaluation of a murmur, all are true except:

- a) Timing (either systolic or diastolic)
- b) Duration of the murmur
- c) Radiation of the murmur
- d) Location of the maximal intensity
- e) Presence or absence of a click

Answer: e. Presence or absence of a click.

48) A 30-year-old man has, on heart auscultation, loud first heart sound, rumbling mid diastolic murmur with opening snap. One of the following is most likely diagnosis:

- a) Pliable (mobile) mitral valve stenosis
- b) (Immobile) mitral valve stenosis
- c) Mitral valve prolapse
- d) Aortic regurgitation
- e) Mitral regurgitation

Answer: b. (Immobile) mitral valve stenosis.

49) A patient is noted to have a crescendo-decrescendo mid-systolic murmur on examination. The murmur is loudest at the left sternal border. The patient is asked to squat, and the murmur decreases in intensity. The patient stands and the murmur increases. Finally, the patient is asked to perform a Valsalva maneuver and the murmur increases in intensity. Which of the following is most likely to be the cause of this murmur?

- a) Aortic stenosis
- b) Chronic mitral regurgitation
- c) Hypertrophic cardiomyopathy (HOCM)
- d) Mitral valve prolapse
- e) Pulmonic stenosis

Answer: c. Hypertrophic cardiomyopathy (HOCM).

50) A patient with aortic stenosis frequently develops:

- a) Exertional dyspnea and angina
- b) Wide pulse pressure
- c) Systemic embolization
- d) Atrial fibrillation
- e) Right ventricular hypertrophy

Answer: a. Exertional dyspnea and angina.

51) One presentation of hypertrophic cardiomyopathy is:

Answer: a. Sudden death.

VULVULAR HEART DISEASE

52) In adults with aortic stenosis, the most common congenital anomaly is:

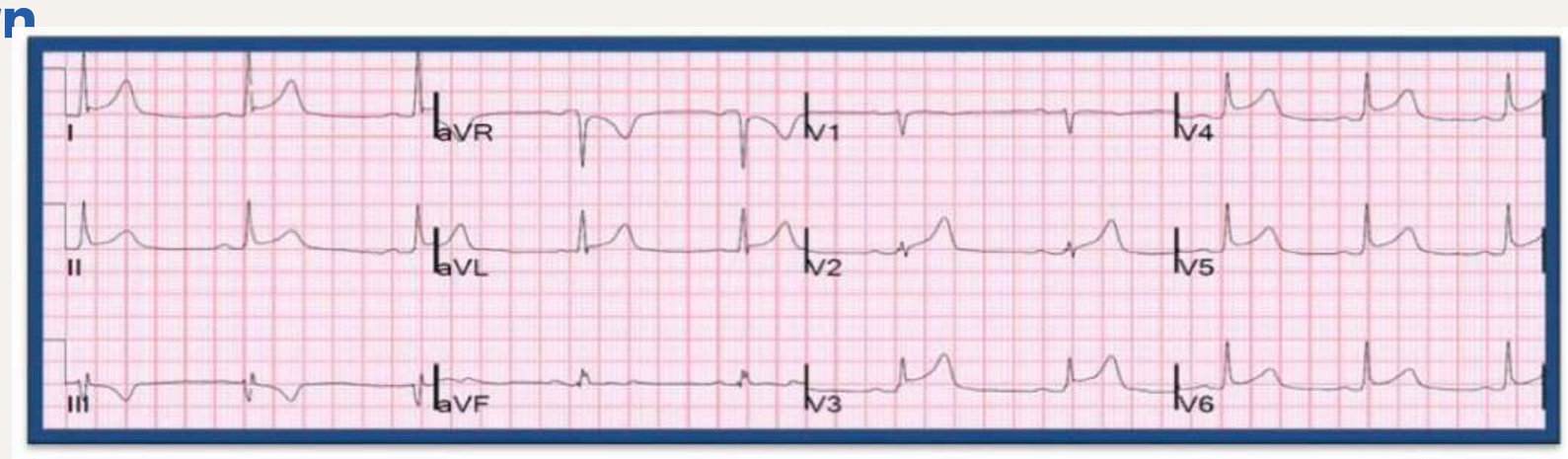
Answer: a. Bicuspid aortic valve.

53) A patient with exertional loss of consciousness with a crescendo-decrescendo murmur most likely has:

Answer: a. Aortic stenosis.

VULVULAR HEART DISEASE

Q:A history of myocardial infarction a week ago A murmur is heard and current ECG is shown



1- What is the ECG finding?

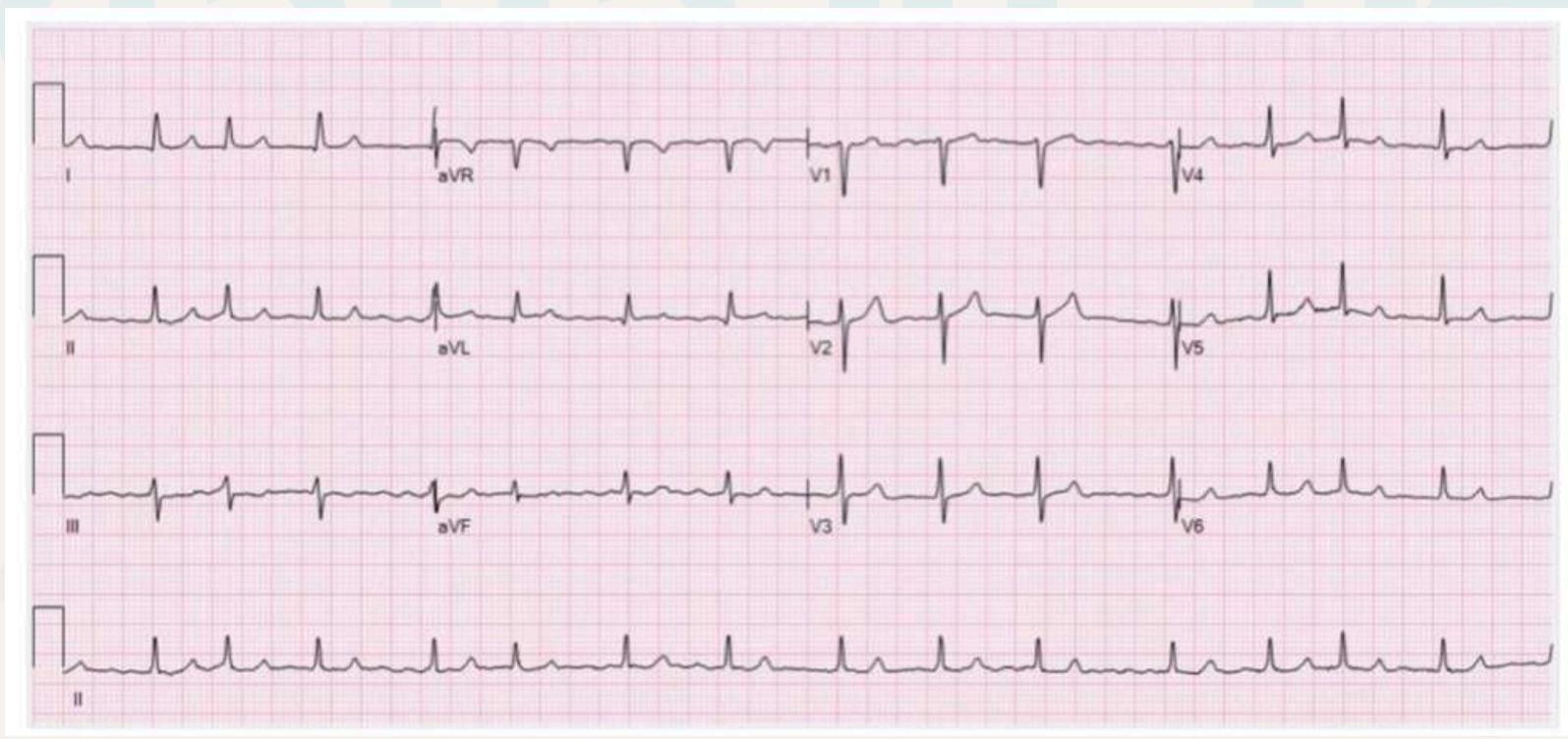
Pericarditis as a post myocardial infarction complication

ST-elevation was an accepted answer

2- What is the cause of the murmur?

Mitral regurgitation due to papillary muscle rupture

A case of palpitation



Q1 \ what is the ECG finding or what is the diagnosis?

Atrial fibrillation

Q2 \ mention 2 possible causes?

1- hyperthyroidism

2- mitral stenosis

Q3 \ what is the treatment of choice?

cardioversion & foci ablation

VULVULAR HEART DISEASE

Q: 50 YO male, smoker, has HTN, & hyperlipidemia came to you with chest pain, effort dizziness or lightheadedness, easy fatigability, & progressive inability to exercise.
On neck examination: Parvous et tardus seen (Slowed carotid upstroke) After Chest examination you found mid-systolic ejection murmur & you felt in left systolic thrill in left mediastinum.

1.What is Your spot Dx. ?
Aortic Stenosis

2. What is Your investigation?
Doppler Echo (very accurate in sever AS)

3. What are the possible Complications?
1. **infective endocarditis.**
2. **Heart failure.**
3. **Cardiac arrest.**
4. **Coronary artery disease**

4. On auscultation of the heart what is the abnomalities?
-Mid systolic ejection murmur at the (RUSB) that's radiates to the neck
-S4 gallop
-a paradoxical S2 split with sever AS
-decreased or abscent S2(Occ.)

5. What is the possible abnormality on CXR ?
LVH

6. What are The Causes?
—Congenital bicuspid valve calcification (400-70Y)
-Age related calcific degeneration of normal tricuspid valve(>75Y)
-Rheumatic heart disease (less freq.)

7.What Is the Treatment?
Aortic valve replacement(AVR)

8. Indication of AVR :
-All symptomatic pt.
-asymptomatic sever AS

30 YO pt came to the ER suffering from SOB, palpitations, sweating & productive cough with hemoptesis , irregular irregular pulse & mid-diastolic murmur heard on the apex of the heart.

VULVULAR HEART DISEASE

1.What the cause of the murmur?

Mitral stenosis (Diastolic rumble (low flow) with opening snap

2. Mention the cause of the SOB.?

Acute pulmonary edema (Pulmonary venous HTN)

3. What caused the irregular pulse?

AF. (most common arrhythmia seen in MS)

4.What is the best diagnostic radiological test in this case?

ECHO

5. What is your management ?

-If symptomatic , or asymptomatic sever MS (<=1.5cm2 or pulmonary HTN) >>
Percutanious mitral balloon valvotomy(PMV) is recommended
-All nonpregnant pt with AF due to MS should be on warfarin

case 1: 48 year old male , on examination , systolic ejection murmur heared on the right upper sternal border , the most likely cause is :

1-senile degfenerative stenosis
2-bicuspid aortic valve ✅
3- ventricular wall rupture
4-ventricular psuodoaneurysm

Notes

- **The systolic ejection murmur of AS is louder with squatting whereas the murmur of hypertrophic cardiomyopathy decreases**
- **The ejection click is common in bicuspid aortic valve pt but not heard with age related AS**
- **The severity assessed by mean valve pr. gradient or maximum velocity across the valve or low flow states (Sever AS >40mmHg ,>4 m/s , <=1cm2)**

- **MS almost always due to rheumatic fever**
- **MS complication : AF (common) , (2ry pulmonary HTN (the main comp.) , HF**
- **Associated with Lt atrial enlargment**
- **S1 is enhanced ,sometimes snaping**
- **On ECG, biphasic P wave (enlarged Lt atrium)**
- **The pt may be present with embolic event**

HYPERTENSION

1- all done as initial screening in HTN except?

Brain natriuretic peptide

2- In systemic arterial hypertension. One statement is false

Select one:

a. Kidneys regulate blood pressure by controlling intravascular volume.

b. Cardiac complications of HTN include diastolic disfunction and coronary artery disease. c. HTN is generally asymptomatic and easily diagnosed.

d. Secondary hypertension HTN is usually familial

e. Hyperglycemia is a known side effect of frusemide

Ans:d

3- Recognized cause of the 2ry HTN include all of the following except :

a) Conns syndrome

b) 1ry hypoaldosteronism

c) Acromegaly

d) Estrogen-containing oral contraceptive

e) Thyrotoxicosis

Ans:b

4- most common cause of death in HTN?

MI

5- Patient come to clinic due to attack of syncope and doctor approved that his newdrug is the real cause of these attack of syncope , which less likely drug :

Aminoglycoside (all of them are HTN drugs + procainamide)

6-Cause of HTN:

- coarctation of the aorta

7-Detrimental effects of HTN include all of the following except :

a) LVH and dyastolic dysfunction

b) Thromboembolic stroke just thromobotic or hemorrhagic

c) Sclerotic and markedly spastic retinal arteries

d) Aortic dissection

e) Acute renal failure

Ans:b

8-In coarctation of the aorta, all are true except:

a. Usually congenital and maybe required

b. Usually situated just distal to the origin of left subclavian artery

c. Associated with increased incidence of bicuspid aortic valve

d. It is an uncommon cause of hypertension in adults

e. It is a cause to left to right shunting of blood

Ans:e

HYPERTENSION

9- Radiofemoral delay present in one of the following condition?
a. In Angina pectoris
b. Coarctation of the aorta
c. Renal artery stenosis
d. Heart failure
e. secondary hypertention

Ans:b

10- All of the following are causes of secondary hypertension, except:
A. Coarcation of the aorta\
B. Renal artery stenosis\
C. Pheochromocytoma\
D. Female hormones nad NSAIDS\
E. Increase in arteriolar peripheral resistance

Ans:e

11- a 50 year old was found to have a heart murmur. On examination his BP in the right arm is 160/100 and in the right leg 120/80. CXR showed rib notching in the upper ribs. What's the likely Diagnosis?
a-Coarctation of the aorta xxx
b-Supravalvular aortic stenosis

Ans:a

12- In renovascular hypertension the following statements are true except ?
a. Mechanism of hypertension is increased renin levels
b. Etiology is fibromoscular dysplasia or atherosclerosis
c. Onset < 30 years and > 55years without family history or recent onset
d. Increase in vanilmandilic acid (VMA)
e. Reccurent pulmonary oedema is a clue for diagnosis

Ans:d

13- all of the following investigation should be done for patients newly diagnosed hypertension except?
a- Urinalysis
b- Renal profile
c- Ecg
d- Chest x ray
e- Brain natriuretic peptide

Ans:e

14- Not related to hypertension treatment aw hek eshi
statin

15- Most common cause of death in hypertensive pts ?
CVA , MI

HYPERTENSION

16- In renovascular hypertension the following statements are true except :
a- Mechanism of hypertension is increased renin levels
b- Etiology is fibromoscular dysplasia or atherosclerosis
c- Onset < 30 years without family history or recent onset >55 years
d- Treatment is usually by ACE-inhibitors if bilateral
e- Reccurent pulmonary oedema is a clue for diagnosis
Ans:d

17- Wrong about hypertension:
A. Complications start >140/90

18- A diabetic patient was diagnosed with new hypertension, best management:
A. Thiazide
B. Enalapril
C. Furosmide
Ans:b

19- All cause hyperkalemia, except:
A. ACEI
B. Furosemide
C. RTA type
Ans:b

20- The most common cause of portal hypertension is:
a. Liver cirrhosis

21- ONE of the following is the mode of action for B-Blockers in controlling hypertension.
a- decrease cardiac out put.
b- Slow the heart rate
c- Increase cardiac force of contraction
d- Increase cardiac output
e- Decrease plasma volume
Ans:b

22- A70 hypertensive woman patient with mild left hemiparesis and finding of peristant atrial fibrillation. Optimal treatment with anti-hypertensive drugs would be ONE of the following
a- close observation
b- permenant pace maker
c- asprin
d- warfarin
e- I.V heparin
Ans

HYPERTENSION

23- ONE of the following is used in treatment of hypertensive Emergency :

a- I.V atenalol (tenormin)

b- oral captopril

c- sublingual nifedipine

d- continous infusion of sodium nitroprusside

e- oral alpha methyl dopa

Ans:d

24- All the following are correct about non-pharmacological therapy in all hypertensive patient Except.

a- weight reduction –BMI- should be < 25 Kg/m2

b- low fat and saturated fat diet

c- low sodium diet < 2 gram per day

d- dynamic exercise e- stop smoking

Ans:a

25- One of the following causes of portal hypertension is caused by Presinusoidal intrahepatic pathology: Veno-occlusive disease:

a- Schistosomiasis

b- Viral hepatitis

c- Alcohol Hepatitis Congestive heart failure

Ans:a

A 48-year-old woman is evaluated during a follow-up visit for hypertension. Blood pressure measurements taken at the past three visits have been in the range of 135 to 146 mm Hg systolic and 86 to 92 mm Hg diastolic. Twenty-four-hour ambulatory blood pressure monitoring shows an overall mean blood pressure of 136/84 mm Hg; daytime readings average 138/85 mm Hg, and nighttime readings average 130/82 mm Hg. She has no other pertinent personal or family history. She takes no medications. On physical examination, blood pressure is 146/92 mm Hg, and pulse rate is 76/min. BMI is 29. The remainder of the examination is unremarkable.

Laboratory studies show a normal chemistry panel; a urine dipstick demonstrates no protein. Which of the following is the most appropriate next step in management? Select one:

a. Begin ACE-inhibitor

b. Begin Ca-channel blocker

c. Recheck blood pressure in the office in 6 months

d. Recheck blood pressure in the office in 1 year

e. Repeat 24-hour ambulatory blood pressure monitoring

Ans: B

AORTIC DIISSECTION

1.Aortic dissection can cause all except :
A.Tamponade
B.Pleural effusion
C.Mitral valve regurgitation

ans:c

2. A 55-year-old man is admitted to the Emergency Department with'tearing' chest pain radiating through to his back.
Examination reveals a pulse of 96 / min regular, blood pressure of 130/ 85 mmHg and oxygen saturations of 97% on room air. A chest x -ray shows mediastinal widening.A CT shows dissection of the ascending aorta. What is the most suitable initial management? Select one:
a. IV sodium nitroprusside
b. Oral verapamil
c. Observe only
d. IV labetalol
e. Surgical repair

ans:d

3.A 22 year old male patient, with central chest pain, radiating to back, he is found to have murmur on exam. Also, he is 2m
tall. Most likely diagnosis:
a. MI
b. Pericarditis
c. Aortic dissection

Answer: C

(tall Marfan syndrome. Plus, he is too young for an MI. Also, chest pain that radiates to back is characteristic of aorticdissection)

CARDIOGENIC SHOCK

For a patient with suspected pulmonary embolism.What is the least appropriate strategy?

a.Thrombolytic therapy if cardiogenic shock is present

b.Initiation of anticoagulation treatment while diagnostic workup is ongoing CT angiography if cardiogenic shock is present

c. D dimer level measurement if shock is present

D.Bed side transthoracic echocardiography if the patient is in cardiogenic shock and CT angiography is not immediately available.

Answer:c

All the following are early complications of acute myocardial infarction Except.

a- cardiogenic shock

b- heart block

c- ventricular fibrillation

d- aneurismal dilatation of infracted area

e- sudden cardiac death.

Answer : d

INFECTIVE ENDOCARDITIS

1. The type of endocarditis most commonly found in patients who are intravenous drug abusers is:
a. Staphylococcus aureus infection of the tricuspid valve
b. S.aureus infection of the mitral valve
c. Haemolytic streptococcal infection of the tricuspid valve
d. Hemolytic streptococcal infection of the mitral valve
e. Pseudomonas aeruginosa infection of the pulmonic valve

Answer: a

2. Eye manifestation in infective endocarditis:
a. Roth spot
b. Kayser-Fleischer ring

Answer: a

3. Cause of death in Malta fever:
a. Infective endocarditis
b. Septic shock

Answer: a

4. IV drug user complaining of scenario of infective endocarditis, blood gram stain reveals G+ bacteria in clusters, what is treatment of choice?
a. Vancomycin
b. Ceftriaxone

Answer: a

5. Clinical features in infective endocarditis include all of the following, except:
a. Appearance of new murmur or change in the quantity of existing murmur
b. Fever
c. CHF
d. Skin and eye lesions
e. No splenomegaly

Answer: e

6. All the following cardiac lesions are associated with high risk of infective endocarditis except:
a. VSD
b. Combined mitral valve disease
c. Aortic stenosis
d. Atrial septal defect
e. Aortic regurgitation

Answer: d

7. Organism responsible for subacute endocarditis — one is true:
a. Streptococcus pyogenes
b. β-hemolytic streptococcus
c. Streptococcus viridans
d. Staphylococcus aureus
e. H. pylori

Answer: c

ECG

About Atrial fibrillation, all are true except:

a. Most common arrhythmia
b. Irregular pulse
c. Rhythm control superior than rate control

Answer: c

In hyperthyroidism, Atrial fibrillation is best treated with:

a. Quinidine
b. Digitalis
c. Digitalis and quinidine
d. Pronesty
e. Antithyroid drugs

Answer: e

Impaired coronary flow reserve is associated with all except:

a. Severe aortic stenosis
b. Severe systemic hypertension with LVH
c. Severe mitral stenosis in AF
d. Totally occluded coronary artery with collateral supply
e. Isolated 30% diameter stenosis of a coronary artery

Answer: e

27 y/o woman with MS and AF on warfarin, target INR:

a. <1.0
b. 1.0–2.0
c. 2.0–3.0
d. 3.0–4.0
e. >5.0

Answer: c

70 y/o woman with AF and TIA symptoms. Next step:

a. Anticoagulant
b. Carotid endarterectomy
c. Clopidogrel
d. Corticosteroid
e. No action

Answer: a

Beta blocker may be used in all except:

a. Thyrotoxicosis
b. Angina
c. Migraine
d. Atrial fibrillation
e. Ventricular fibrillation

Answer: e

Wrong about mitral stenosis:

a. AF is associated with presystolic accentuation
b. The later the opening snap, the less severe the stenosis

Answer: a

Not a cause of atrial fibrillation:

a. Cor pulmonale
b. Alcoholic cardiomyopathy
c. Hypertension
d. Acute rheumatic fever
e. Rheumatic heart disease

Answer: d

ECG

9. **All are true in AF, except:**

a. A wave seen before QRS on EKG
b. Pulse deficit between apical and radial rates
c. Irregularly irregular
d. Treated by digoxin and Maze surgery

Answer: a

10. **Least common cause of AF:**

a. WPW syndrome
b. Mitral valve disease
c. Hypertension
d. Pericarditis
e. Thyrotoxicosis

Answer: a

11. **30 y/o man with hemiplegia, irregular pulse, absent JVP a-wave. Diagnosis:**

a. Complete heart block
b. Atrial fibrillation
c. Atrial flutter
d. Sinus tachycardia
e. Sinus bradycardia

Answer: b

12. **70 y/o woman with AF and hemiparesis. Optimal antihypertensive treatment:**

a. Observation
b. Pacemaker
c. Aspirin
d. Warfarin
e. IV heparin

Answer: d

13. **Irregular irregularity indicates:**

a. Multiple PVCs
b. Multiple PACs
c. Atrial fibrillation
d. Second degree heart block
e. Sinus tachycardia

Answer: c

14. **Atrial fibrillation is treated by all except:**

a. Digoxin
b. Cortisone
c. Quinidine sulfate
d. Cordarone
e. Beta blocker

Answer: b

15. **Drug of choice for SVT:**

a. IV adenosine

Answer: a

16. **Amiodarone, all true except:**

a. Prolongs plateau phase
b. Potentiates warfarin
c. Prevents VT & SVT
d. Causes corneal deposits
e. Strong negative inotrope

Answer: e

ECG

16. **Amiodarone, all true except:**

a. Prolongs plateau phase
b. Potentiates warfarin
c. Prevents VT & SVT
d. Causes corneal deposits
e. Strong negative inotrope

Answer: e

17. **Most common arrhythmia in WPW:**

a. Atrial ectopics
b. Ventricular tachycardia
c. AVNRT
d. Ventricular fibrillation

Answer: c

18. **ECG finding typical of hyperkalemia:**

a. Peaked P wave
b. U wave
c. Peaked T wave
d. ST depression
e. Narrowed QRS

Answer: c

19. **3 weeks post-MI with chest pain & ST elevation. Diagnosis:**

a. Re-infarction
b. Pericarditis
c. Ventricular aneurysm with VT

Answer: c

20. **VT with syncope, avoid which drug:**

a. Adenosine
b. Amiodarone
c. DC cardioversion
d. Flecainide
e. Verapamil

Answer: e

21. **VT followed by increased creatinine. Type of kidney injury:**

a. Pre-renal
b. Renal
c. Post-renal

Answer: a

22. **Cardiac arrest with VF post-NSTEMI, first shock given. Next step:**

a. Check pulse
b. 30:2 compressions
c. Uninterrupted compressions
d. Amiodarone 300mg
e. Shock again

Answer: c

23. **Not part of acute VF management:**

a. Defibrillation
b. Lidocaine
c. Epinephrine
d. Bretylium
e. Manganese

Answer: e

ECG

24. **Treatment immediately for VF:**

a. IV amiodarone
b. IV epinephrine
c. Defibrillation at 200J
d. IV adenosine

Answer: c

25. **Dilated cardiomyopathy, true:**

a. LV dilated with fibrosis
b. Recovery common
c. Peripartum CMP poor prognosis
d. EMB is sensitive/specific
e. LBBB is common

Answer: e

26. **Indication for thrombolysis in ECG:**

a. New LBBB
b. Q waves
c. 2 mm ST depression
d. New RBBB
e. T inversion in chest leads

Answer: a

27. **Conductive system of heart, wrong statement:**

a. SA→AV→His→Bundle branches→Purkinje
b. LBB < RBB
c. RBB → RV, LBB → LV & septum
d. AP via rapid K diffusion

Answer: d

28. **Fixed splitting of S2 seen in:**

a. LBBB
b. ASD
c. HTN
d. Aortic stenosis
e. LV outflow obstruction

Answer: b

29. **ECG findings in inferior STEMI include all except:**

a. Sinus tachycardia
b. Sinus bradycardia
c. Mobitz II block
d. Junctional rhythm
e. LBBB

Answer: e

30. **Treatment of 2nd degree heart block:**

Answer: Pacemaker

31. **Hyperkalemia ECG findings except:**

a. ST depression
b. Peaked T wave
c. Flat P wave
d. T wave inversion

Answer: d

ECG

31. **Hyperkalemia ECG findings except:**

a. ST depression

b. Peaked T wave

c. Flat P wave

d. T wave inversion

Answer: d

32. **45 y/o man post-NSTEMI collapses, monitor shows VF. Shock given. Next:**

Answer: c (Uninterrupted compressions)

33. **Not part of acute VF treatment:**

Answer: e (Manganese)

34. **True about early ST elevation post angina:**

Answer: e (Early repolarization)

35. **False about NSTEMI:**

Answer: c (100% reperfusion with thrombolysis)

36. **Diffuse ST elevation 5 days post-MI, Dx:**

a. STEMI

b. Dressler

c. Myocarditis

d. PE

e. Pneumonia

Answer: b

37. **ST depression in I, aVL indicates:**

Answer: a (Posterior MI)

38. **ST depression in aVF, V2, V3; high RV pressure, Dx:**

Answer: b (Right ventricular infarction)

39. **Acute MI, all true except:**

Answer: c (Thrombolysis = 100% reperfusion)

40. **ST elevation is associated with:**

a. RVH

b. LVH

c. Digoxin

d. Subendocardial infarct

e. Early repolarization

Answer: e

41. **ECG in pericarditis shows:**

Answer: a (T wave inversion)

42. **Hyperkalemia ECG, all except:**

Answer: a (Prominent P wave)

43. **Wrong in hypokalemia ECG:**

Answer: a (Delta wave)

44. **Wrong about T wave:**

Answer: a (Can be inverted in all leads in pericarditis)

45. **ECG in hypokalemia, all except:**

a. Flattened T

b. U wave

c. Short QT

d. ST depression

e. Ectopic beats

Answer: c

ECG

patient with stable angina on asprine, nitrate and B-Blocker, developed 3 episodes of sever and long –lasting chest pain each day over the past 3 days.His ECG and cardiac enzymes are normal.One of the following is the best treatment
a- admit the patient and start I.V digoxine
b- admit the patient and start I.V heparine
c- admit the patient and start I.V prophylactic streptokinase
d- admit the patient and for observation without changing hismedications
e- Discharge the patient with increasing the dose of B-blocker and nitrate

Ans: B

Hyperkalemia chages on ecg :
PR prolongation and QRS widening which one
Wrong about ECG of hyperkalemia >>
peaked p wave

Wrong about ECG findings in hyperkalemia:
A. Pronounced P wav
ECG signs of hyperkalemia may include all of the following except : a) Peaked T wave
b) QRS widening
c) Delta wave
d) Prolonged P-R interval
e) Sine wave

Answer: C

Not used in correction of K+ for the following case K level is 6.3 and normal ECG:
A. sodium bicarbonate
B. Hemodialysis
C. Insulin and Dextrose
D. Salbutamol
E. Beta blocker

Answer: E

ECG signs of hyperkalemia may include all of the following except : a) Peaked T wave
b) QRS widening
c) Delta wave
d) Prolonged P-R interval
e) Sine wave

Answer: C

Patient with chest pain and nonspecific anterolateral changes on ECG, what is the indication for giving clopidogrel?
A) If contraindicated to give aspirin
B) For 6 months when the mortality is 5%
C) For 12 months when the mortality is 5%

Answer:A

Young female patient had a heart block on ECG, along with bilateral lung infiltration on chest X-ray, what is the diagnosis?
A) Sarcoidosis
Which part of ECG correspond to the closure of mitral valve?
A) P wave
B) PR interval
C) QRS complex
D) ST segment

Answer: C

ECG

46. 72 y/o woman with anterior STEMI and hypotension post-TNK. Next step:

a. Continue therapy

b. GP IIb/IIIa inhibitor

c. Repeat TNK

d. Emergency PCI

e. Urgent CABG

Answer: d

which involve resemble mitral valve closure in ECG?

A- P interval

B- QRS

Answer:B

Most common cause of death in MI?

Ventricular arrhythmias

A 70 year old women has a history of dyspnea and palpitations for six months, an ECG at that time showed atrial fibrillation, she was given digoxin, diuretics and aspirin. She now presents with two short lived episodes of altered sensation in the left face, arm and leg, there is poor coordination of left hand, ECHO was normal as was a CT head scan. What is the most appropriate next step in management?

a. Anticoagulant

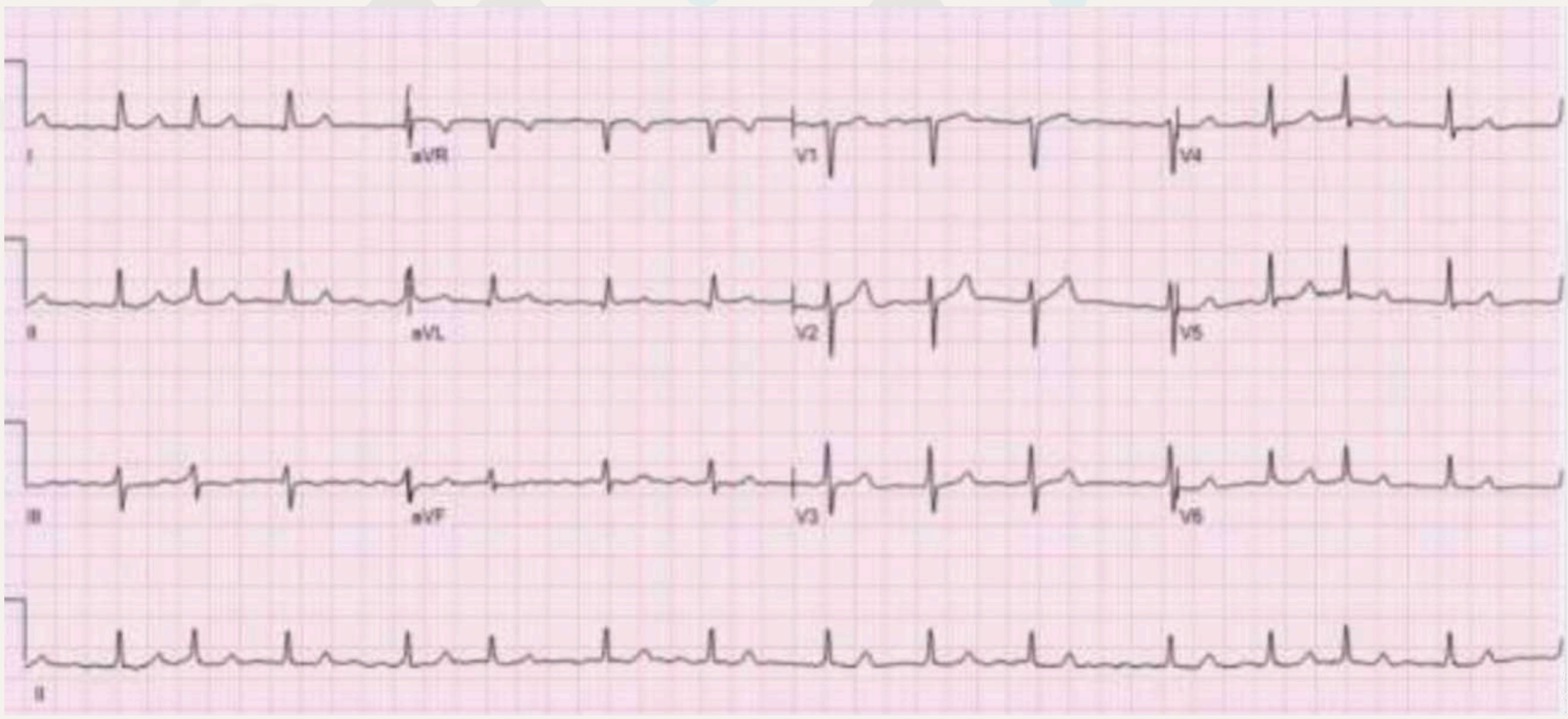
b. Carotid endarterectomy

c. Clopidogreld. Corticosteroid

e. No action

MINI-OSCE

Answer: A



1) give me 2 finding

(absent p wave / irregular irregularly rhythm)

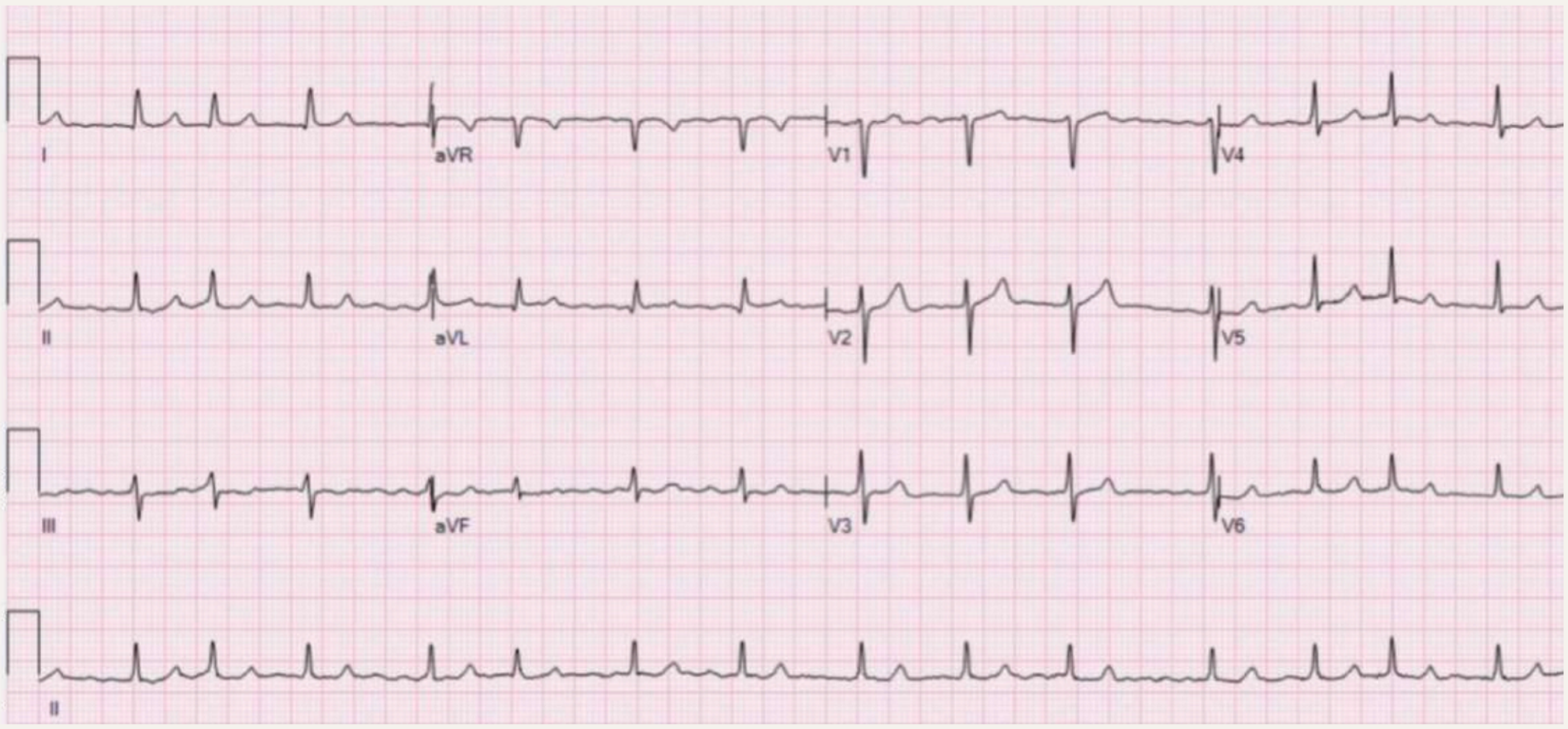
2) diagnosis?

(AFib)

3) give me 3 line of treatment

(cardioversion, rate control like CCB and digoxin, rhythm control like amidarone)

ECG



Q1) a 43 years old patient comes to the hospital with palpitations and you did an ECG and you see this picture.

- what is your clinical diagnosis?

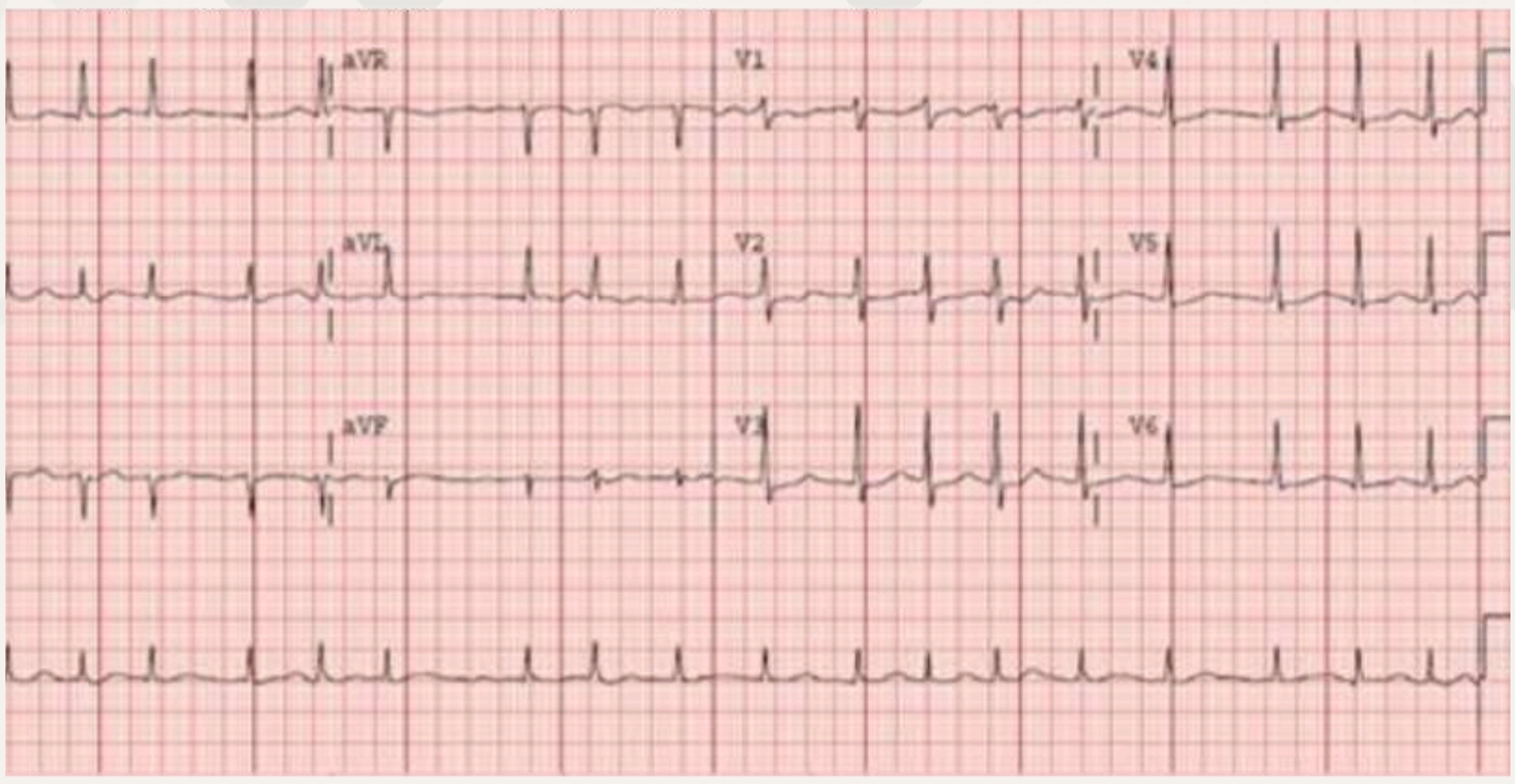
a)Afib
b) Atrial flutter
c) PSVT

Ans:a

- what medication you would give him?

a) Beta blockers
b) Anticoagulant
c) CCBs
d) Aspirin

Ans:a



Patient had MI 6 weeks ago, presented to ER, with this ECG, he was symptomatic.

Q1: Diagnosis?

Afib

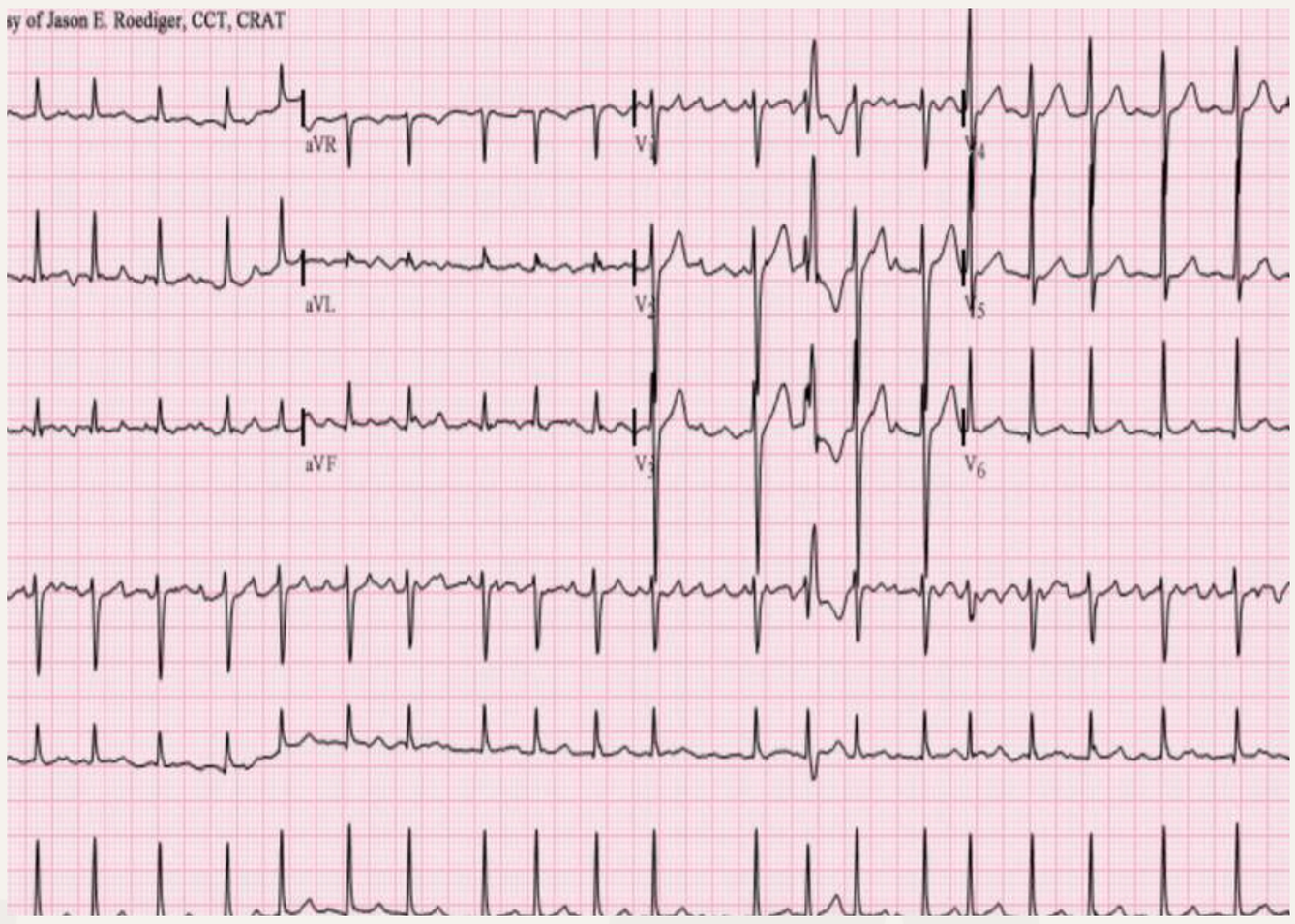
Q2: Treatment?

- **Rate control and electro cardioversion**

ECG

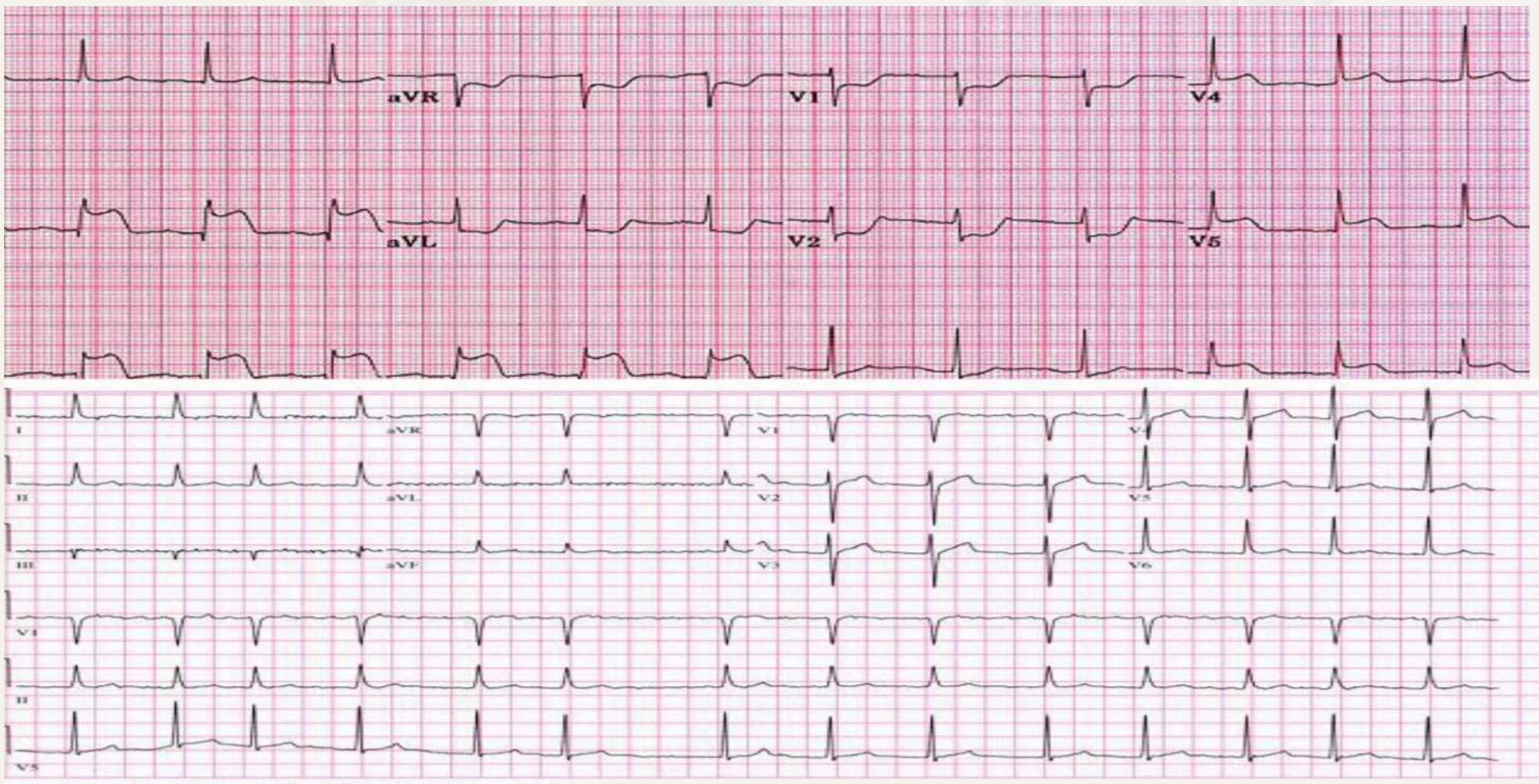
Q9: the diagnosis of this ECG?

- Ventricular tachycardia
- SVT
- Atrial fibrillation
- WPW



Ans:3

- NOTE:
(it was very similar to SVT in the exam!)



•Patient came to ER complaining of sudden chest pain, ECG was done (pic 1), what are the abnormalities in this ECG, and what is the diagnosis?

Acute inferior wall ST elevation MI

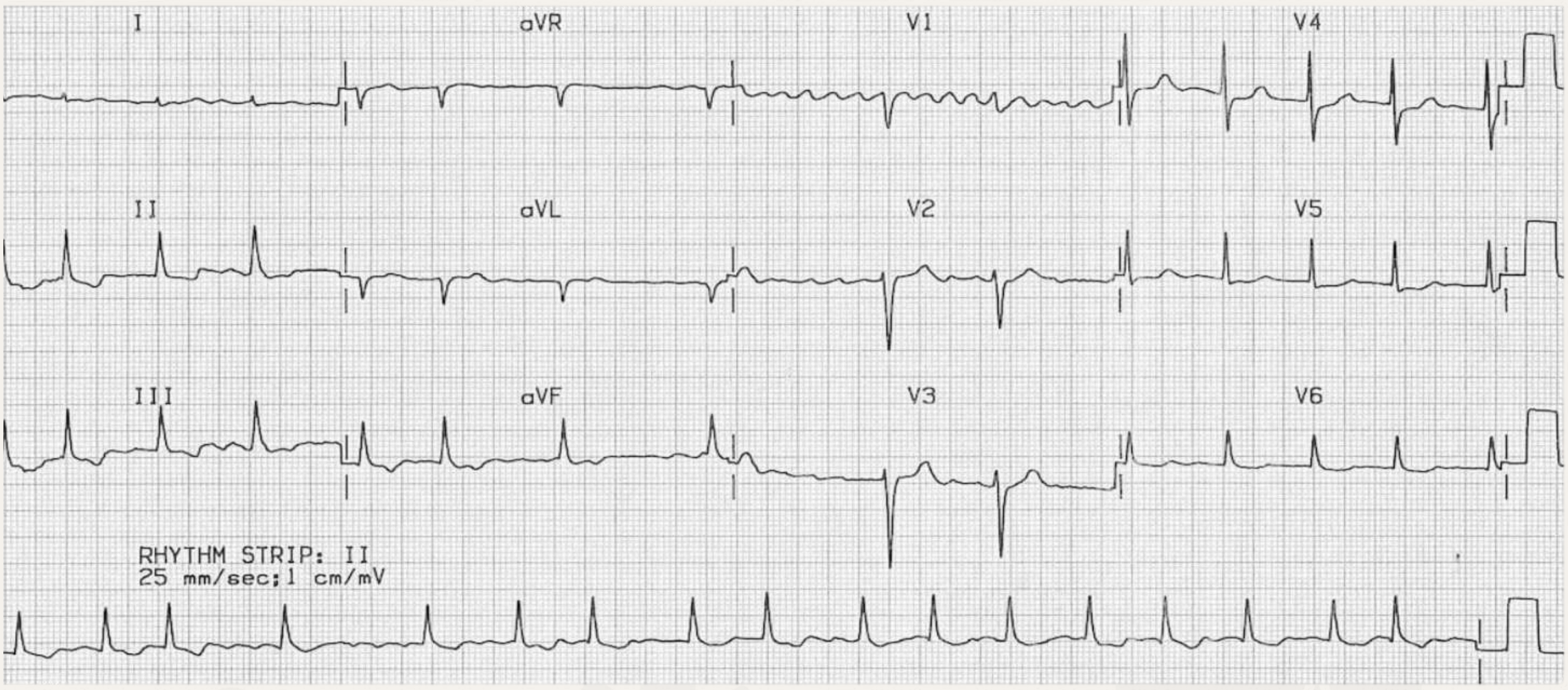
•After 2 days another ECG was done (pic 2), what are the abnormalities, what is the diagnosis?

Atrial fibrillation

ECG

Station 3

Patient presented with palpitation & the following ECG



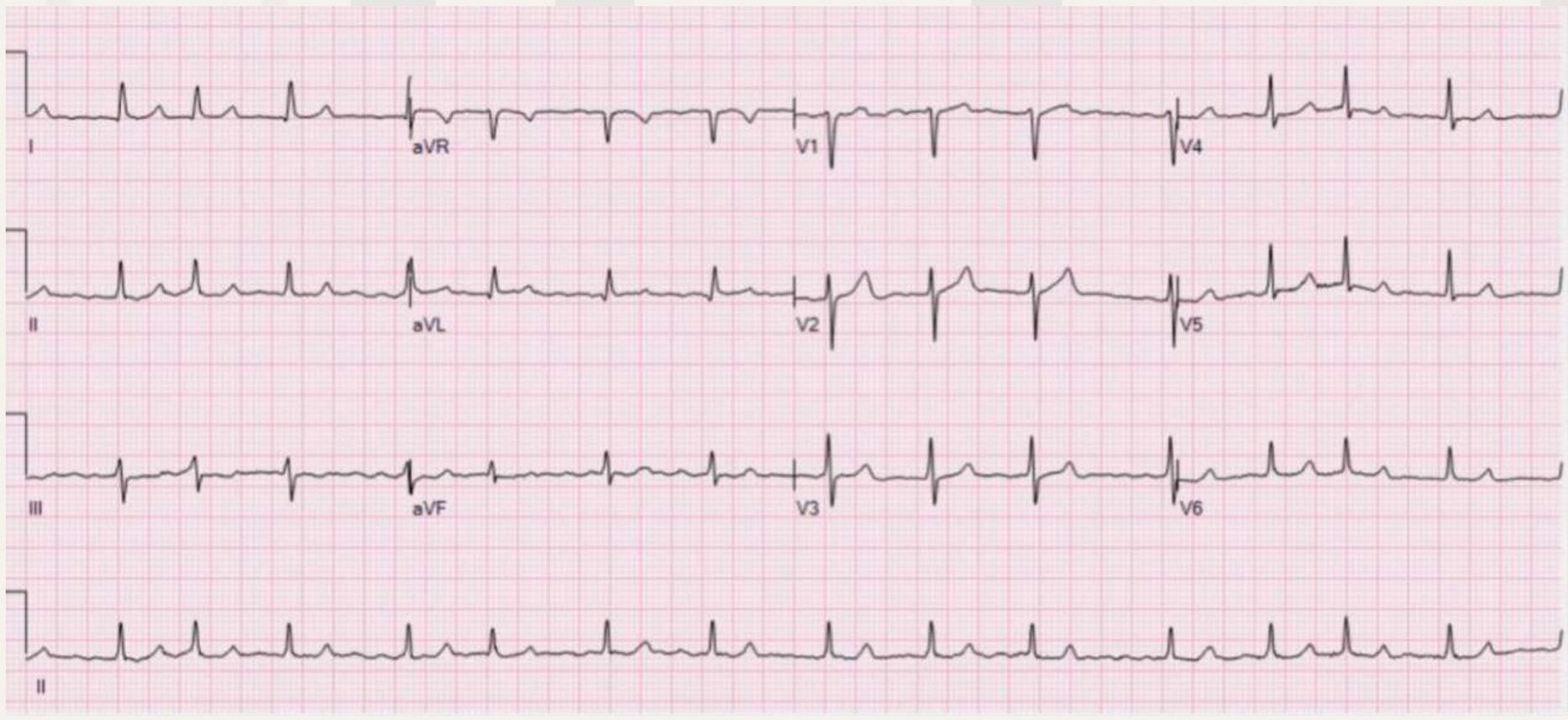
Q1: what are the findings?

No identifiable P wave, irregular RR interval

Q2: diagnosis?

Atrial fibrillation

A case of palpitation



Q1 \ what is the ECG finding or what is the diagnosis?

Atrial fibrillation

Q2 \ mention 2 possible causes?

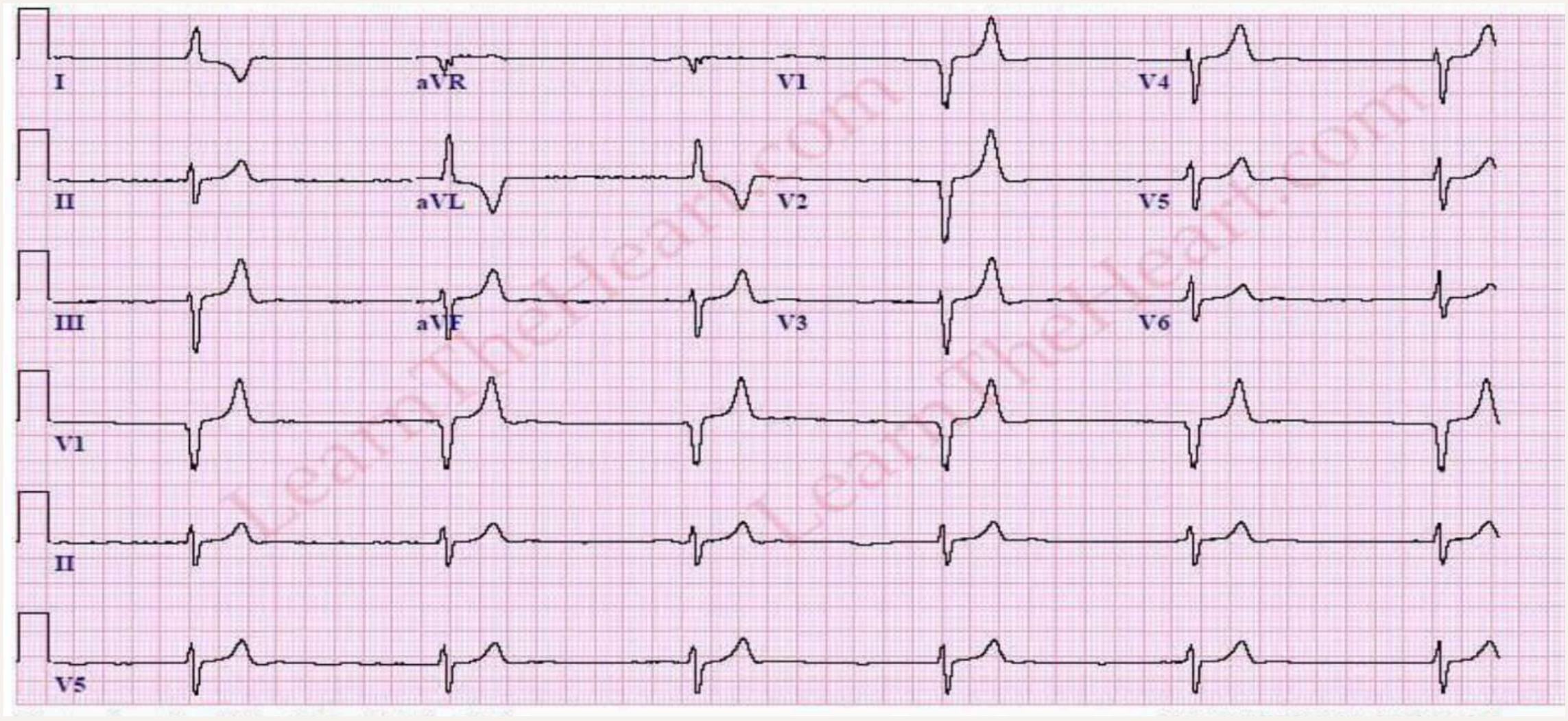
1- hyperthyroidism

2- mitral stenosis

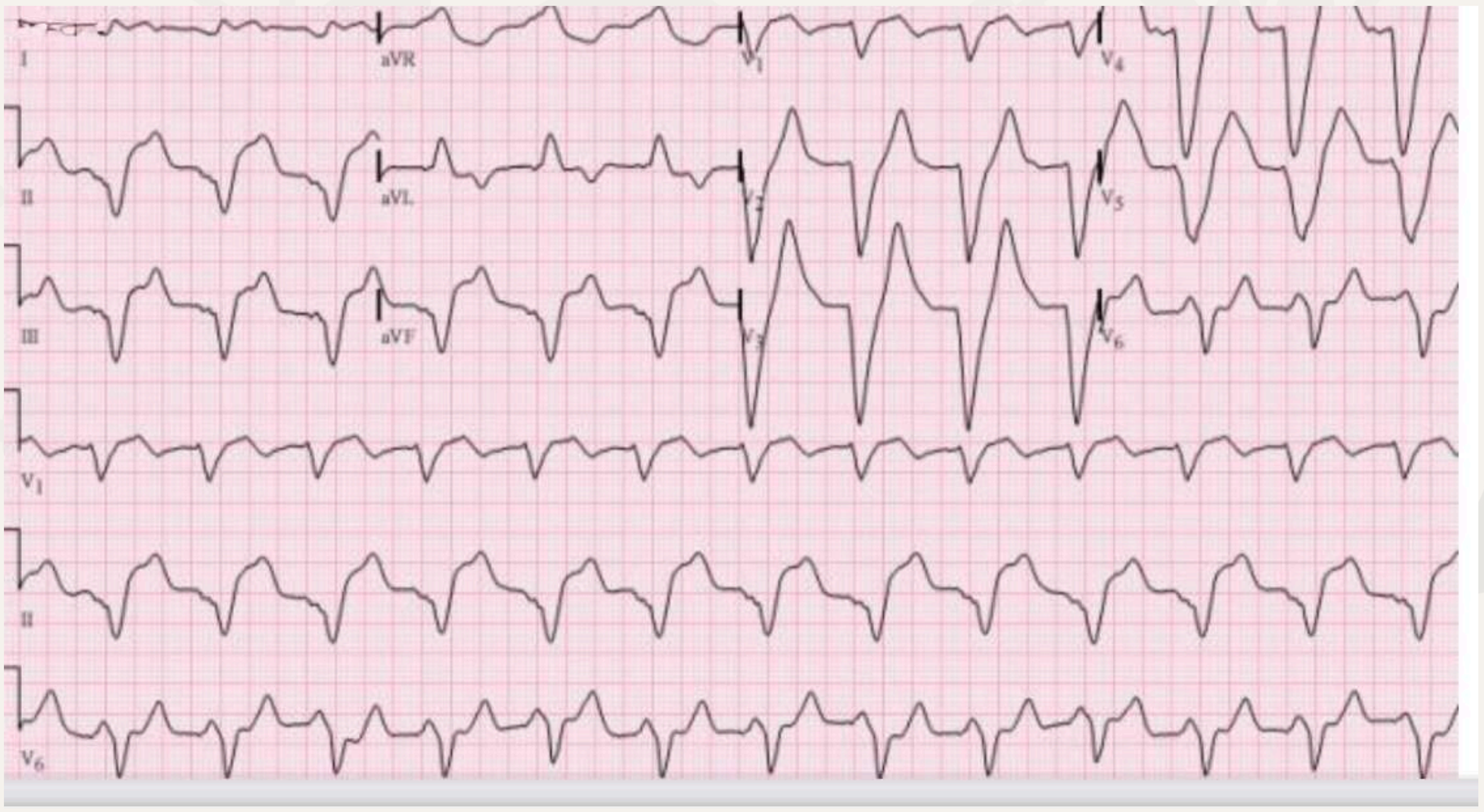
Q3 \what is the treatment of choice?

cardioversion & foci ablation

ECG



Finding: hyperacute T wave
Caused by: hyperkalemia



Q1: mention 2 abnormalities in ECG ?

- T-inversion
- Wide QRS

Q2 what is your DX?

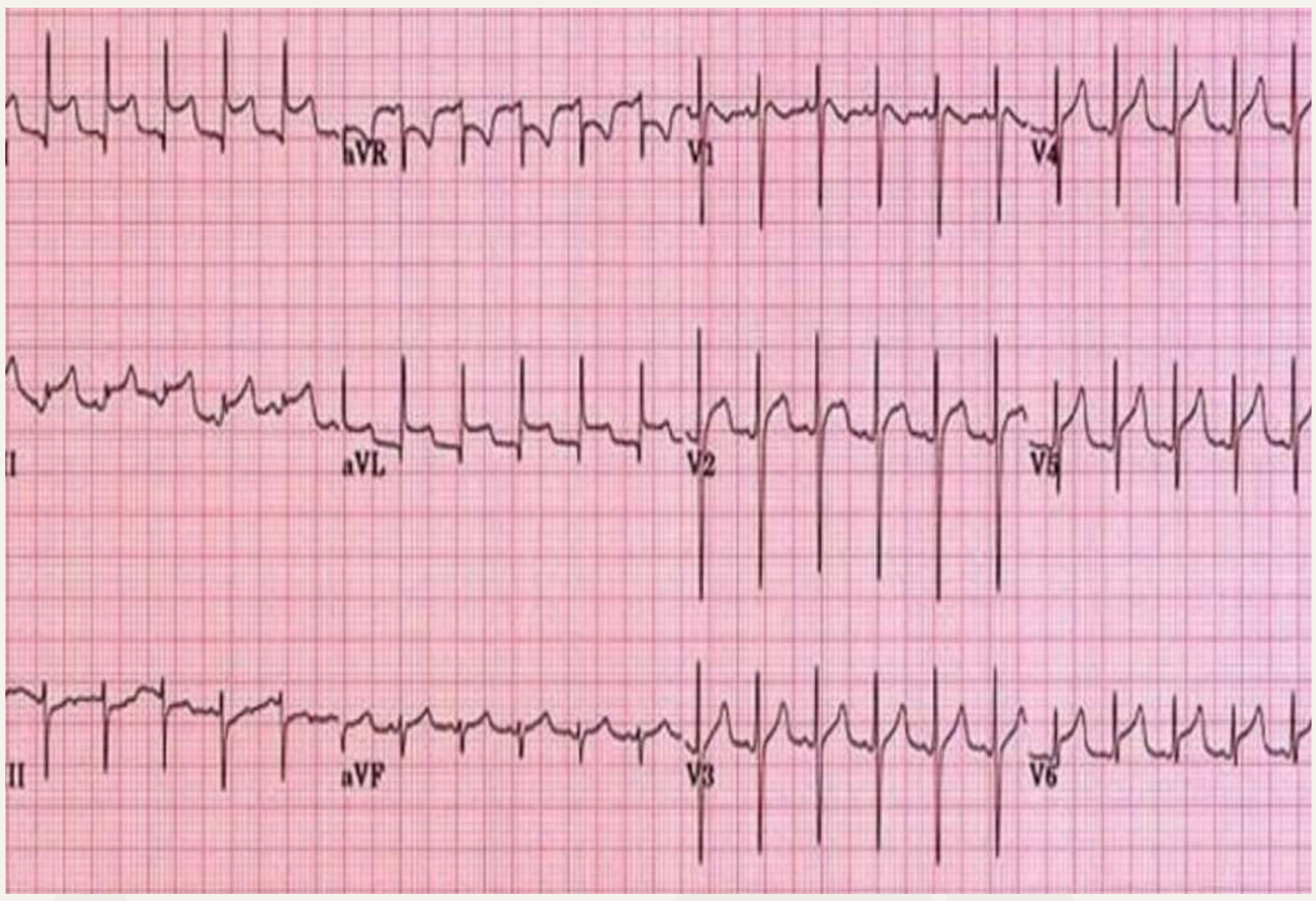
hyperkalemia

ECG

Q7: the cause of this ECG ?

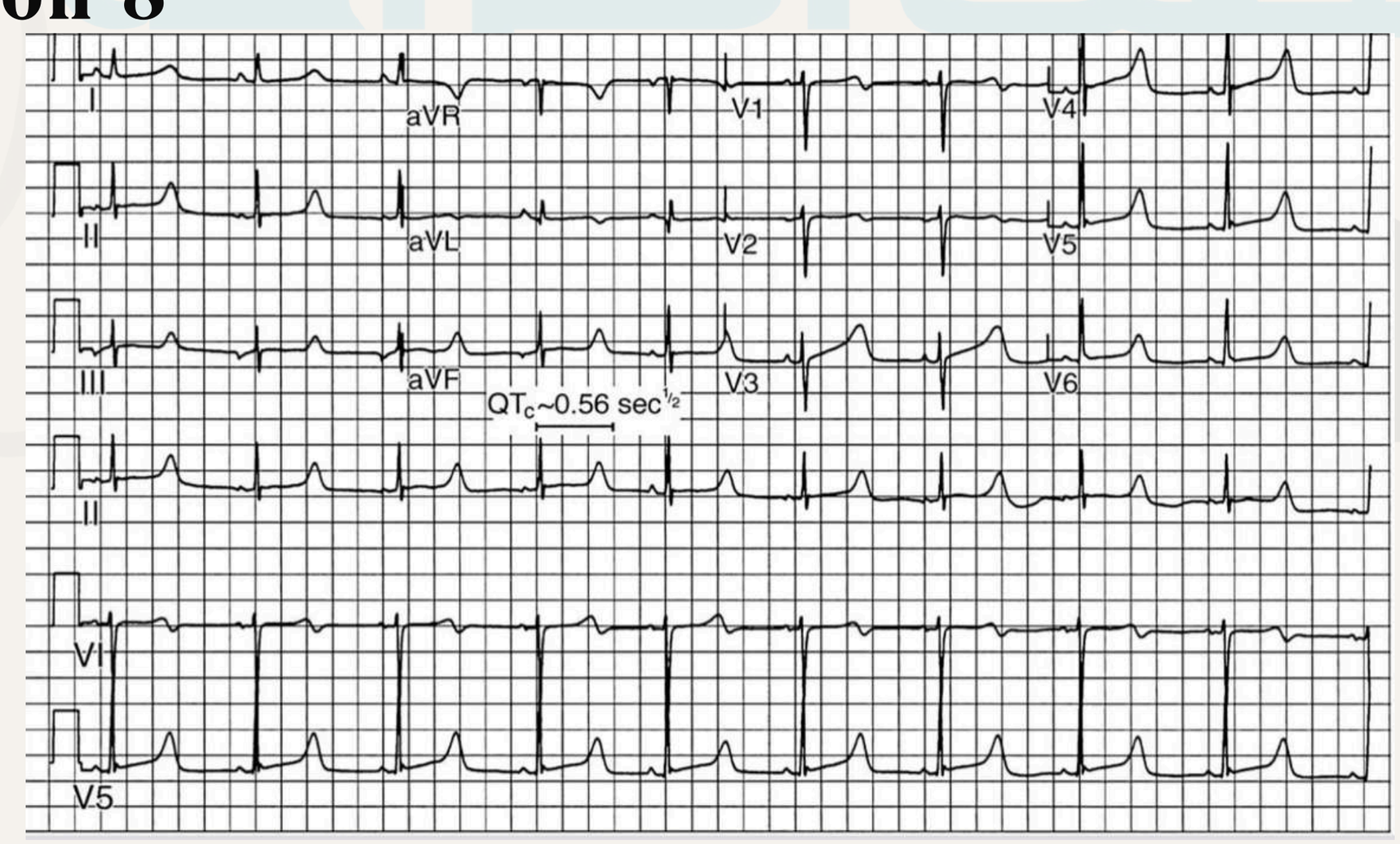
- Atherosclerosis
- Coronary occlusion
- Viral infection

Ans:3



- NOTE:
  (you must know the
  ECG is for pericarditis)

Station 8



Post parathyroidectomy pt. with this ECG:

Q1: Mention abnormality

- Long QT interval

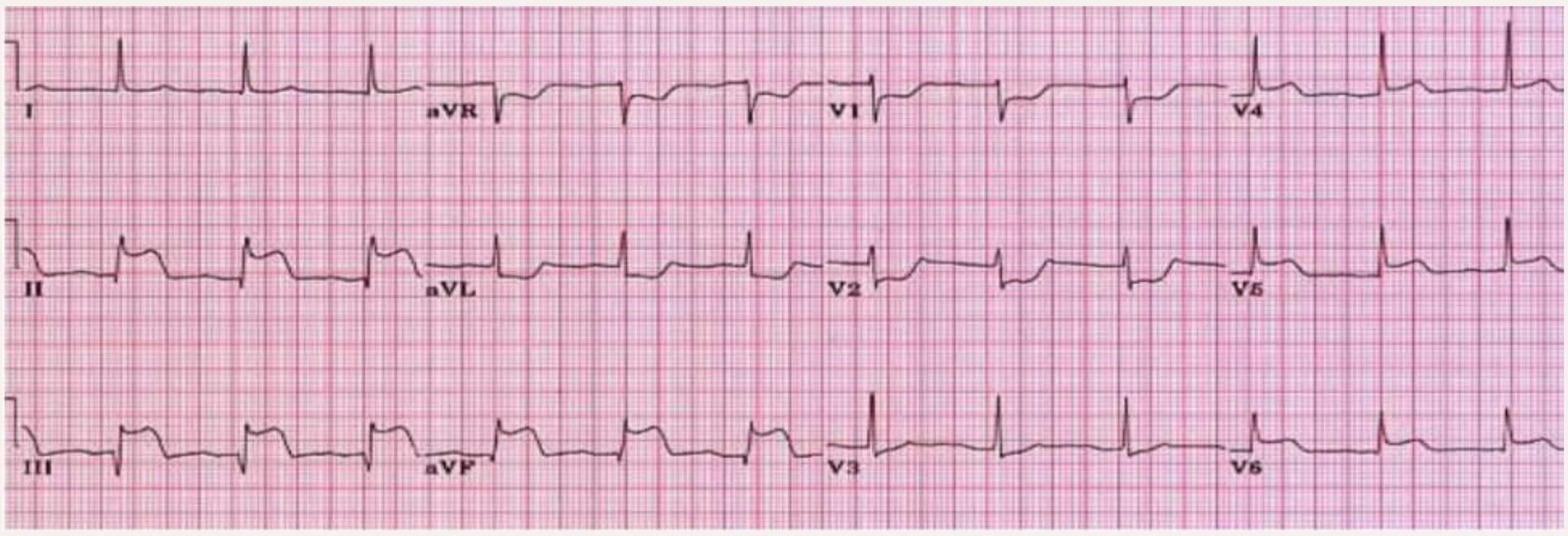
Q2: mention 3 conditions are associated with this ECG?

- hyperphosphatemia
- Hypocalcemia
- Hypomagnesemia

NOT SURE :/

ECG

A 60 years old patient present with chest pain and sweating for 1 hour duration



Q1\what is the diagnosis?

Inferior MI

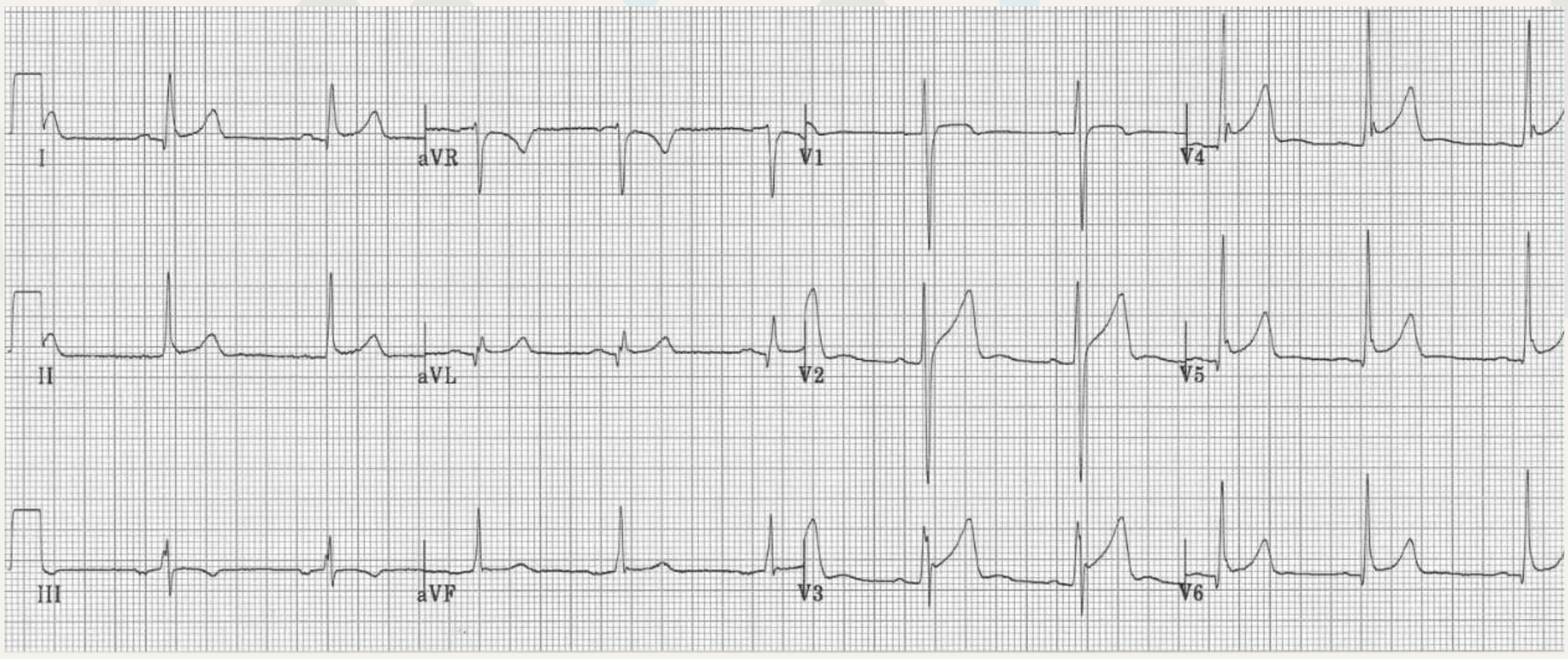
Q2\what are the treatment of choice?

1- MONA morphine, O2, nitrate, aspirin

2- catheterization or thrombolytics

Q3 after 5 days the patient present with shortness of breath and hypotension and when auscultate there is normal breath sounds, what is the diagnosis and what is the treatment?

Pericarditis as a complication of MI and the treatment is pericardiocentesis



Q1: patient came with chest pain and flu- like symptoms.
What is the most likely diagnosis:

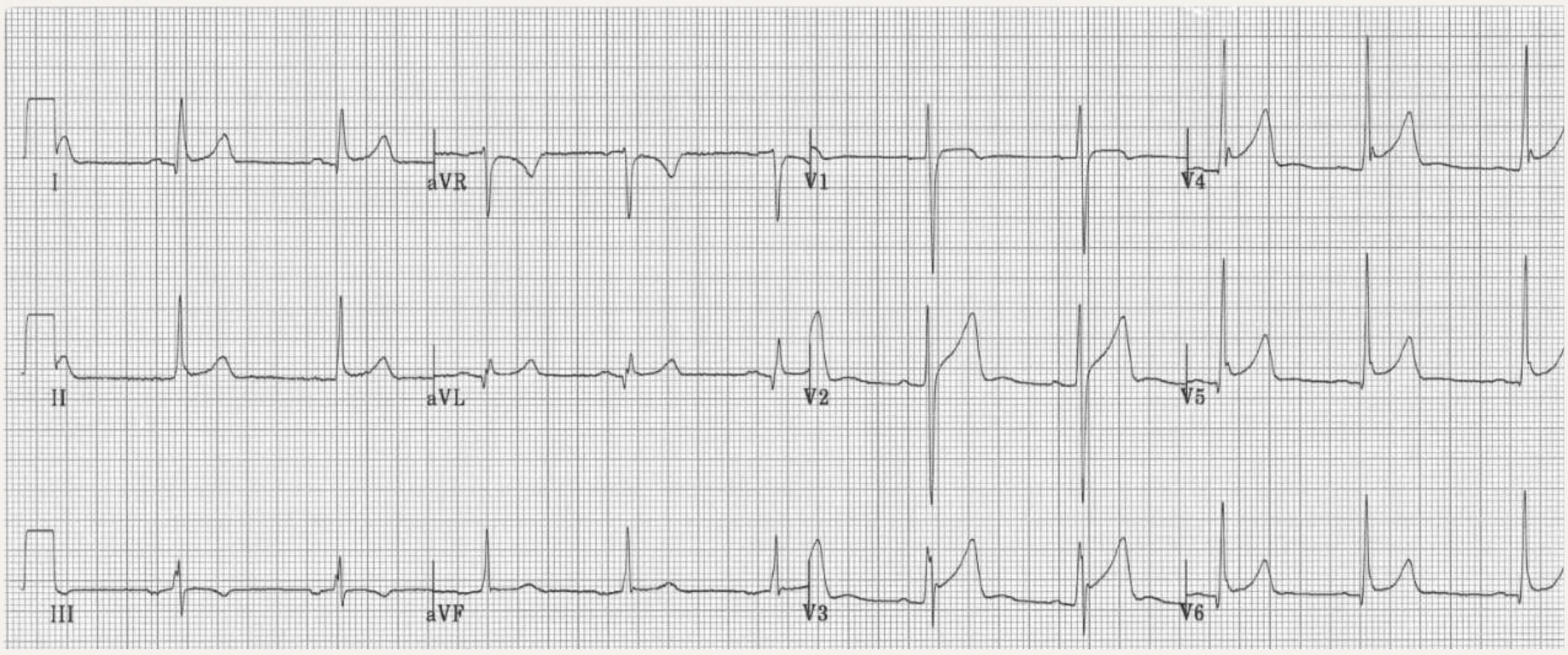
A.Inferior MI

B.Pericarditis

C.Atrial fibrillation

Ans:b

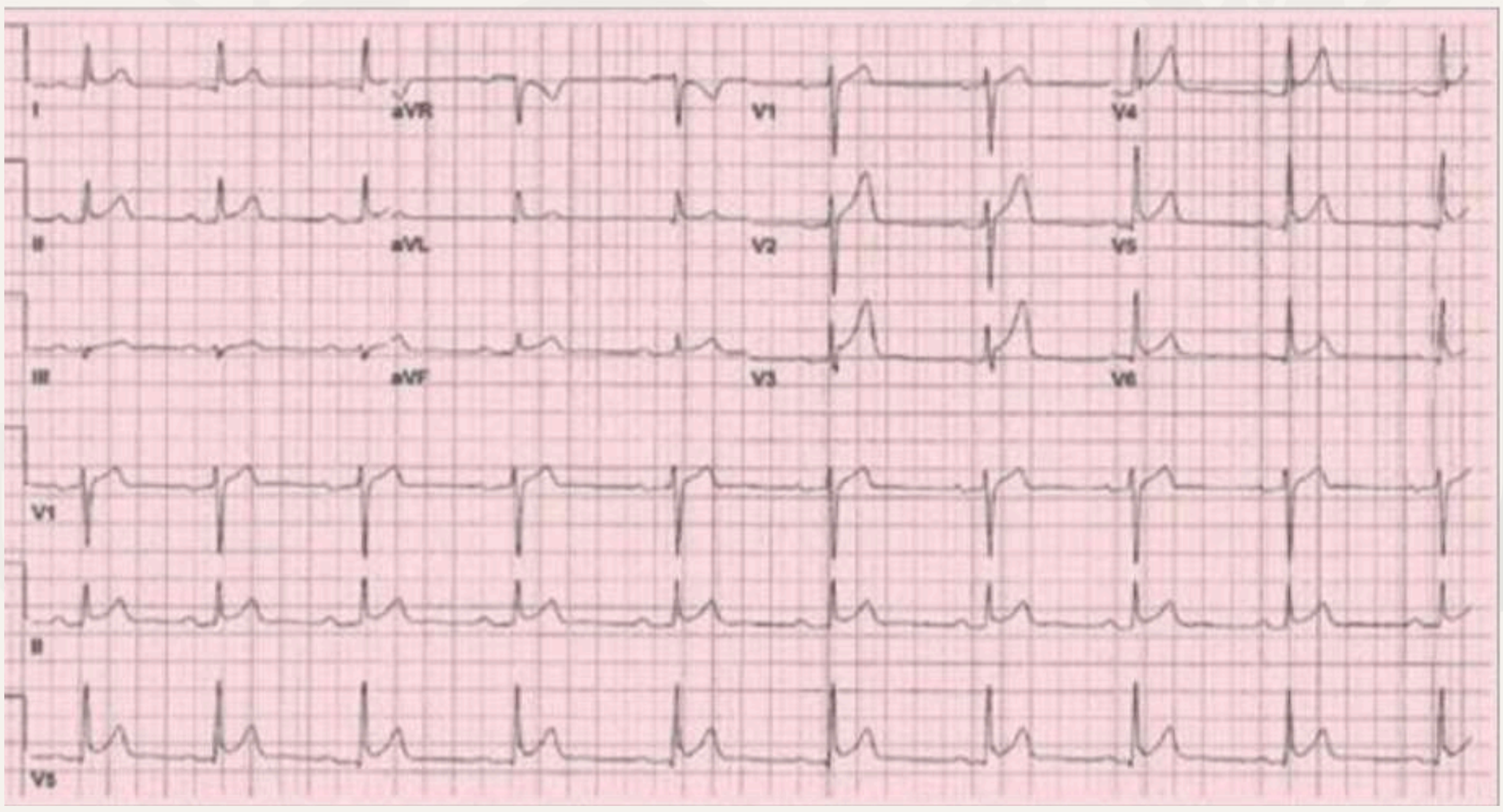
ECG



Q2: patient came with chest pain and flu-like symptoms.
The proper management is:

A.Anti-platelet
B.NSAIDs and colchicine
C. observation

Ans:b



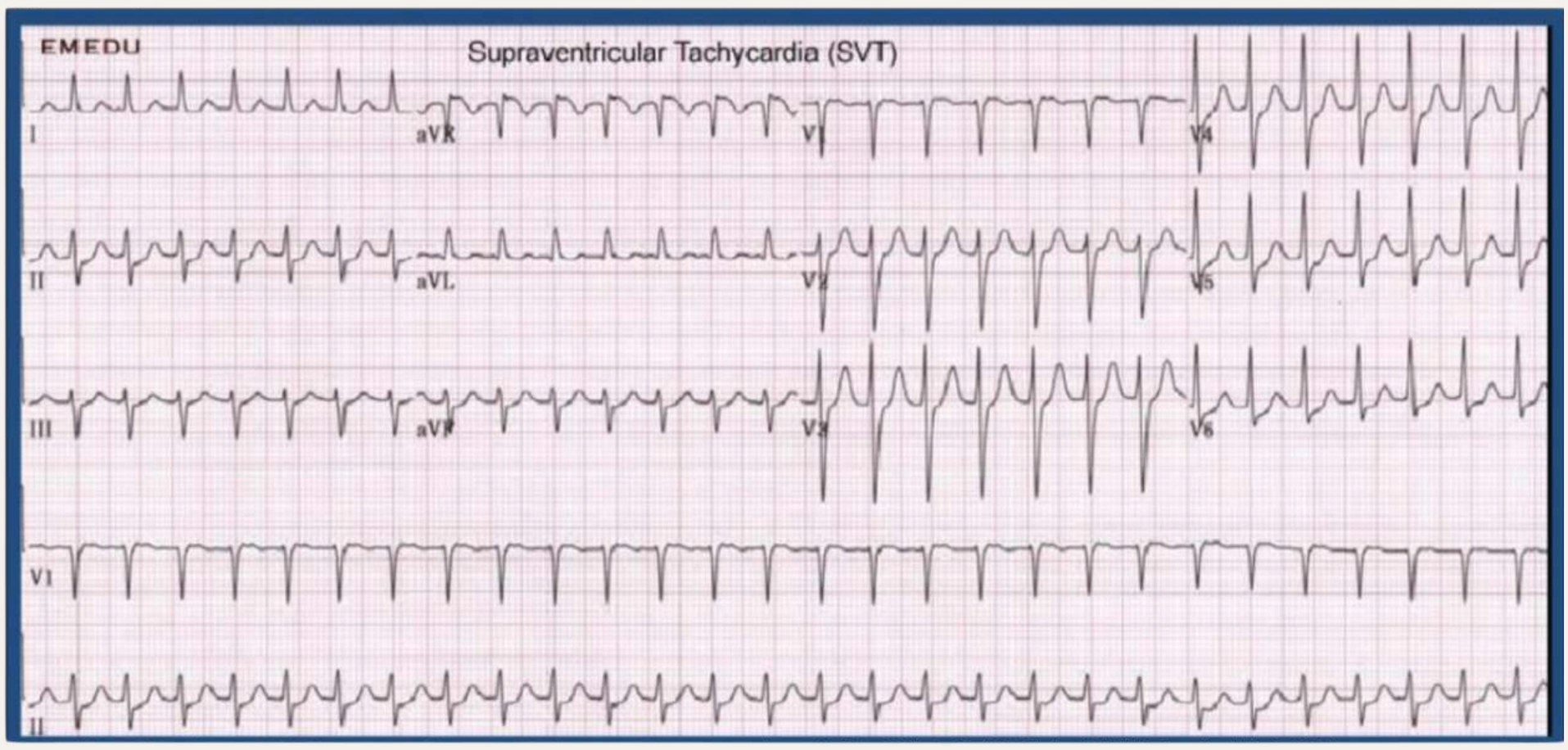
1) What is your diagnosis?
Acute pericarditis

1) List three causes for this condition?
Idiopathic infectious - acute MI

1) Investigation to confirm your diagnosis?
ECG,Echocardiogram

1) What is the treatment?
NSAIDS-glucocorticoids-colchicine - treat underlying cause

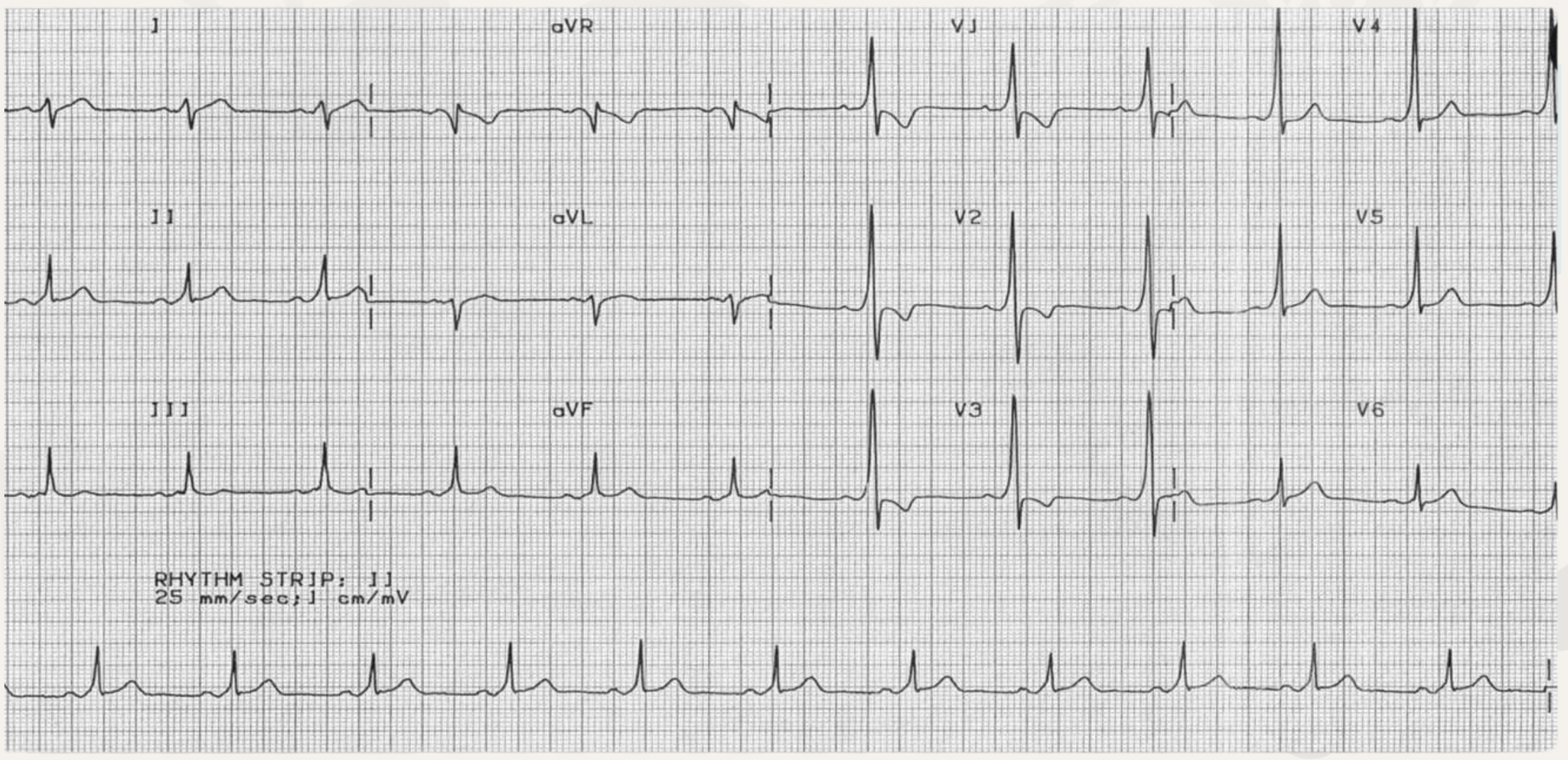
ECG



Q2:26 years male patient came with chest pain and recurrent palpitation, regarding the following ECG, What is your diagnosis? And your management?

-Supraventricular Tachycardia

-IV Adenosine



Q1: Dx?

WPW

Q2: Tx?

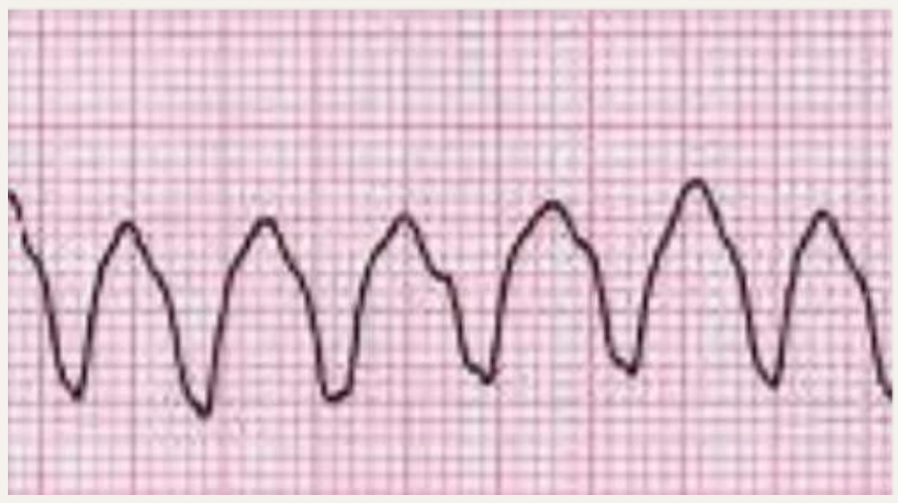
percutaneous ablation of the accessory bundle

case 3: 60 years old patient presented with severe palpitations ecg shown in the picture :

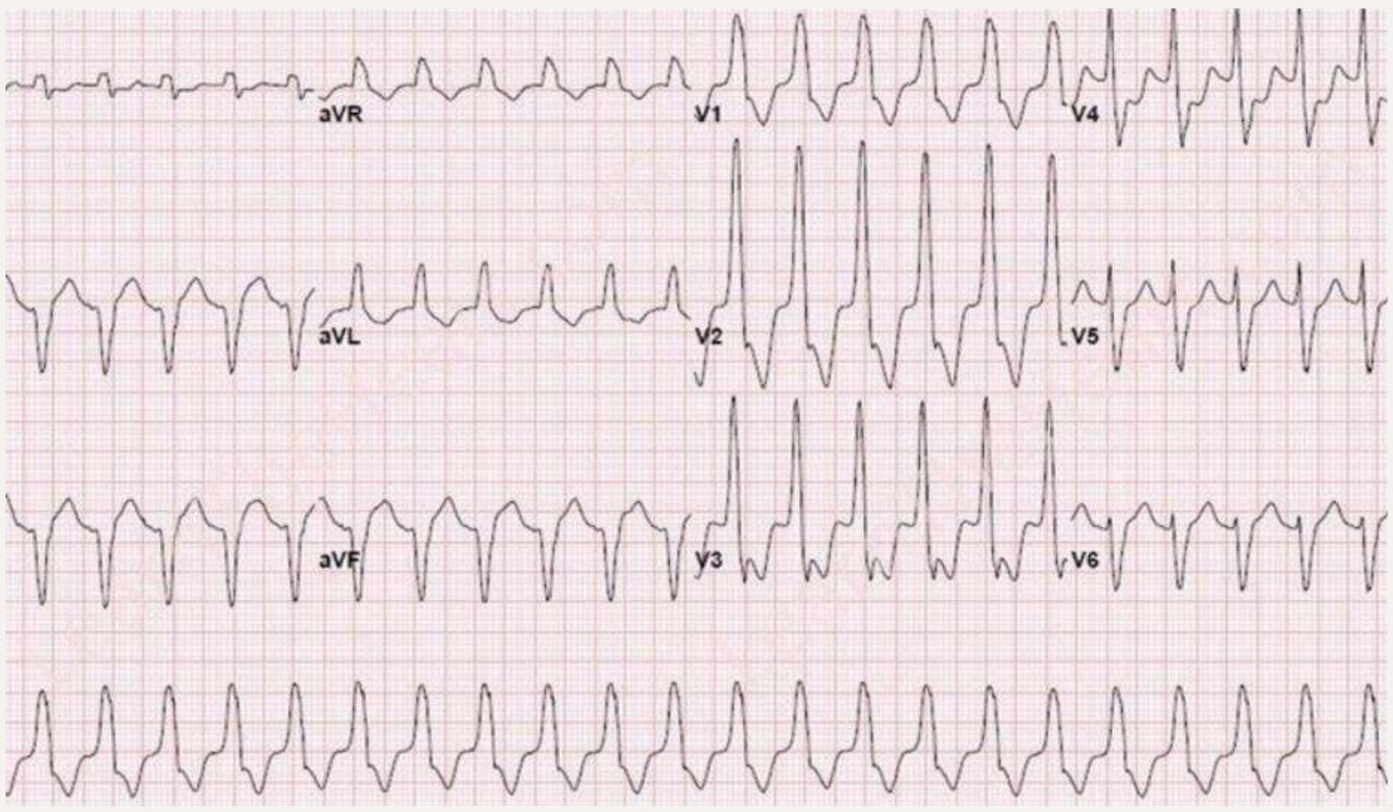
ventricular tachycardia

the first line treatment of this patient (he is hemodynamically unstable)?

Immediate synchronous DC cardioversion



ECG



Q3: patient came with chest pain and blood pressure 90/50. What is the most likely diagnosis:

A.SVT
B.Monomorphic ventricular tachycardia
C.Atrial fibrillation

Ans:b

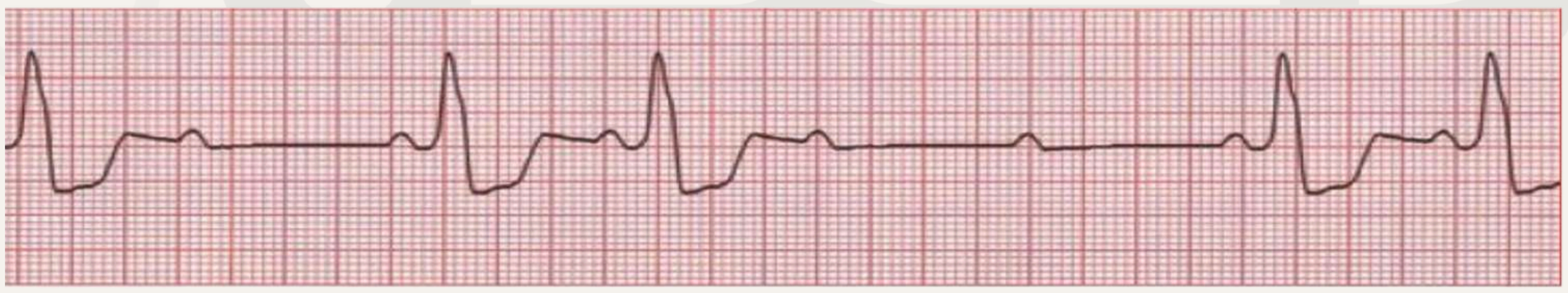
Q4: patient came with chest pain and blood pressure 90/50. What is the initial line of management:

A• Amiodarone

B.Immediate synchronous DC cardioversion

C• aspirine

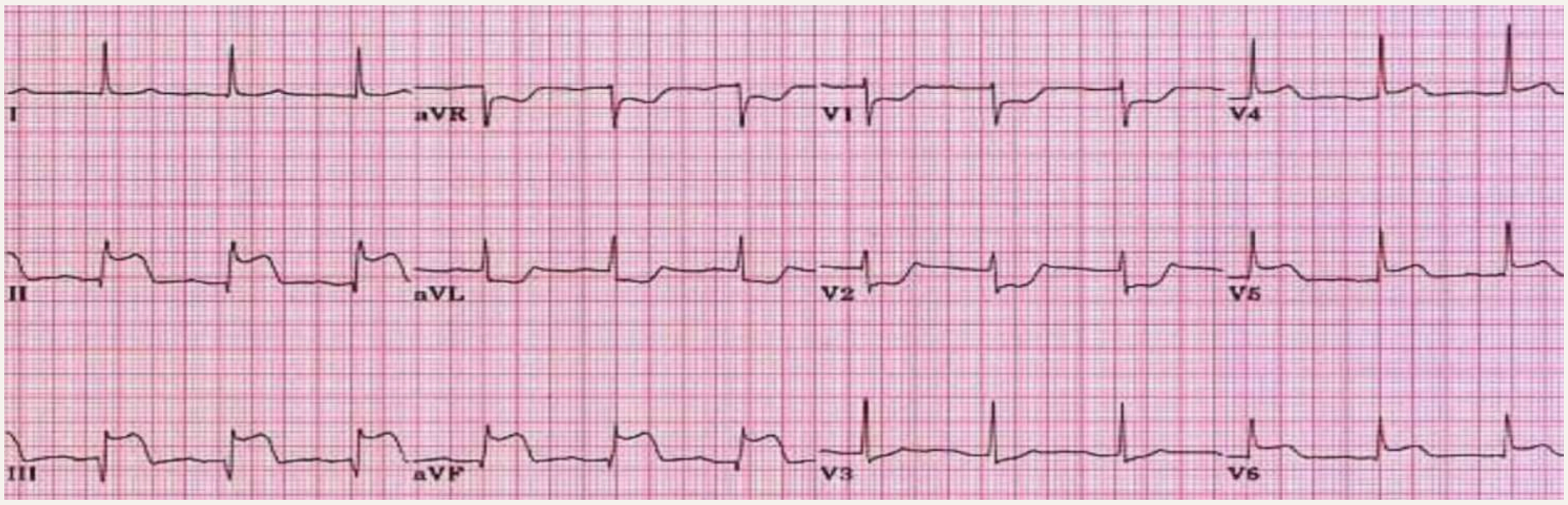
Ans:b



Q1: Dx:
Mobitz 2

Q2: TTT:
Pacemaker

ECG



1)what is your diagnosis

(inferior MI)

2) give me 3 finding in this ECG

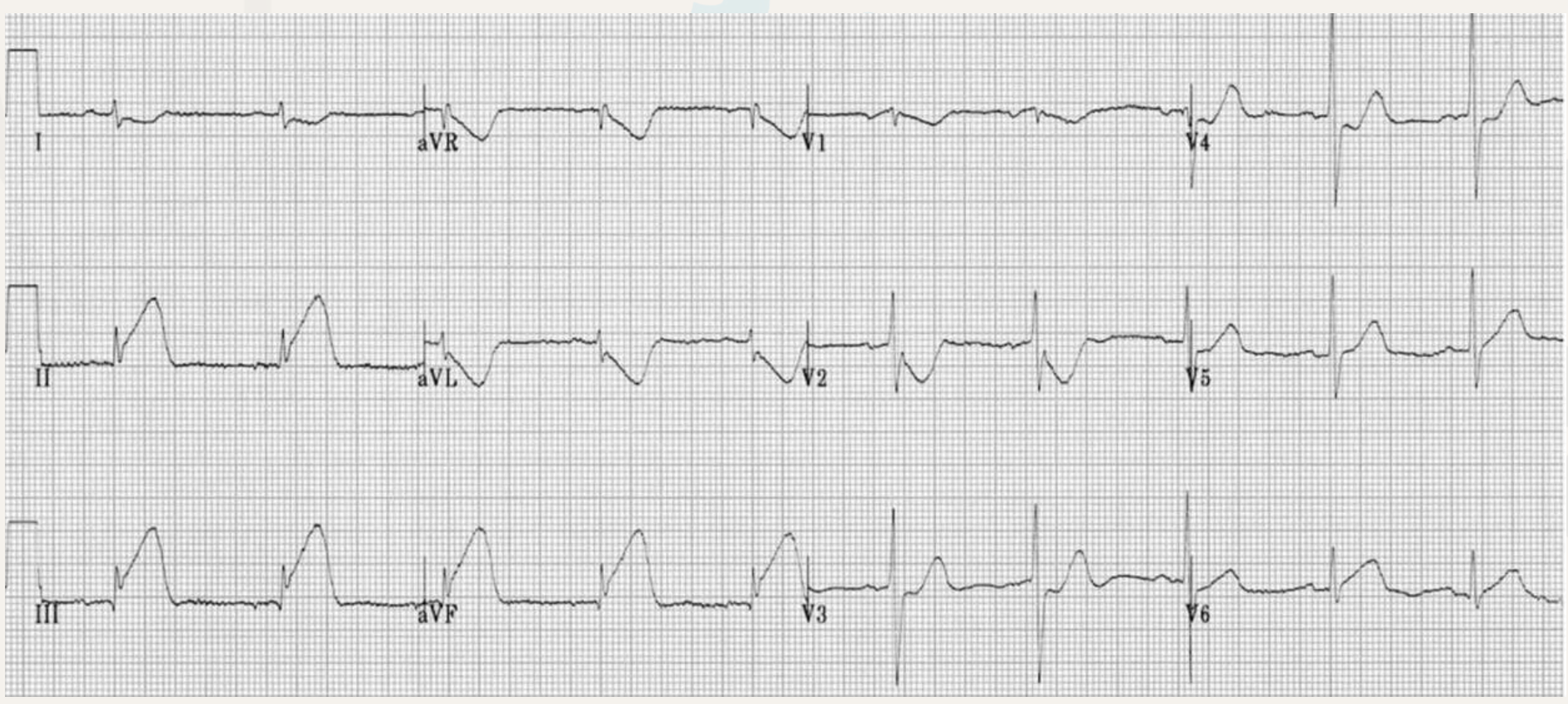
(ST elevation,St depression,.....)

3) give me 2 lab investigations

(cardiac enzyme/ Echo)

4) give me 4 line of treatment

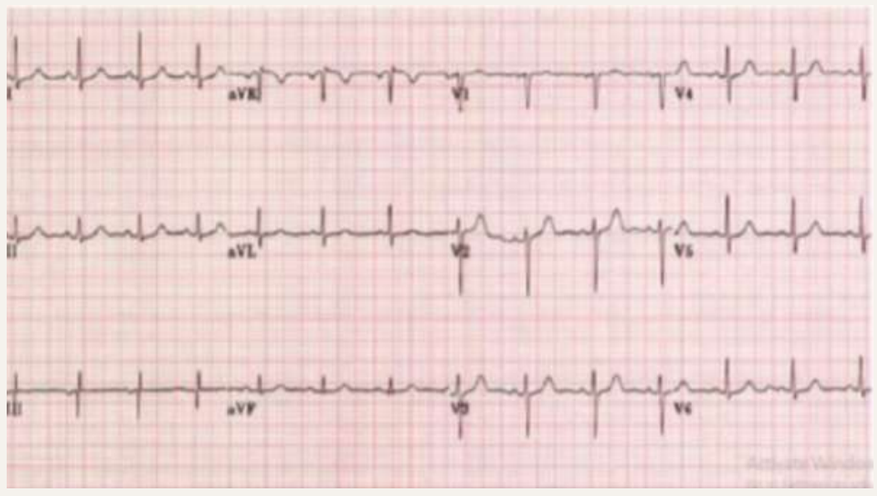
(02, antithrmboltic,aspirin, PCI



Q: Dx ??

- inferior STEMI

Patient presented with chest pain ... he had elevated CKMB ...



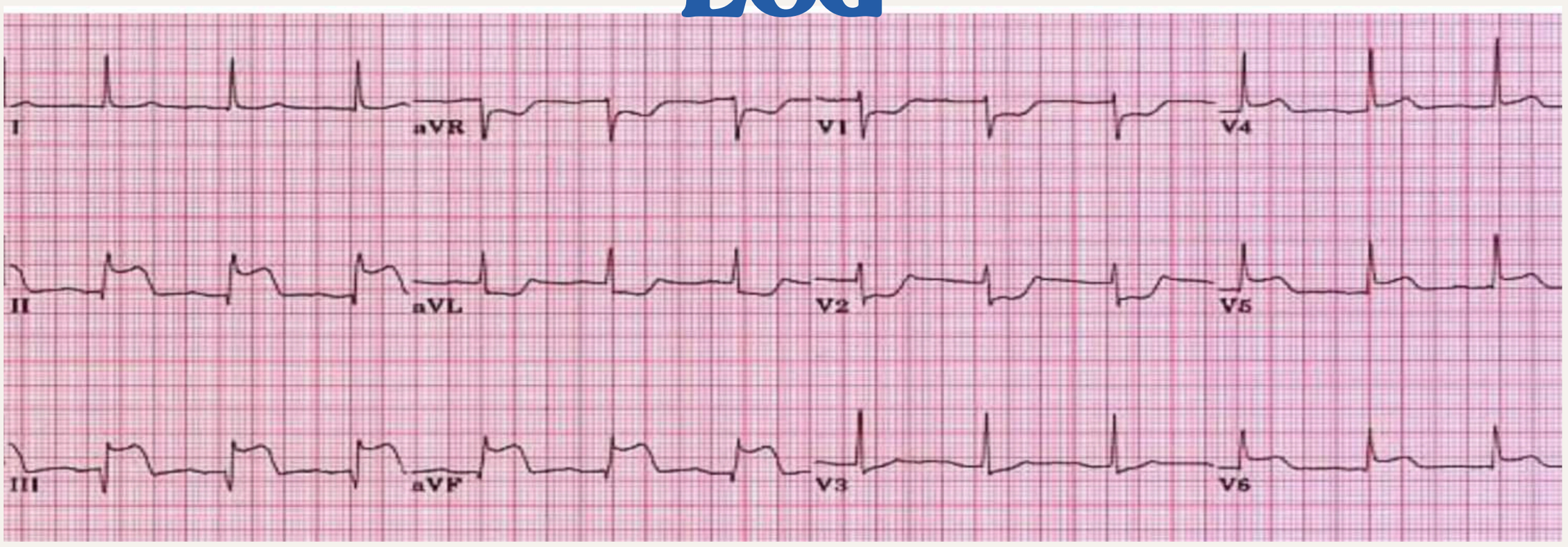
1) Describe the ECG?

1) What is your diagnosis?
Non-STEMI

1) What is the treatment ?, ,

aspirin, heparin, beta blockers, oxygen, ACE inhibitors

ECG



Q5) a 60 year old patient comes to the hospital suffering from chest pain and discomfort, you did an ECG and the result is shown in this picture.

What is your diagnosis?

Inferior wall MI

What is not important for the management of this patient?

a) Cardioversion

b) Nitrate

c) ACE inhibitor

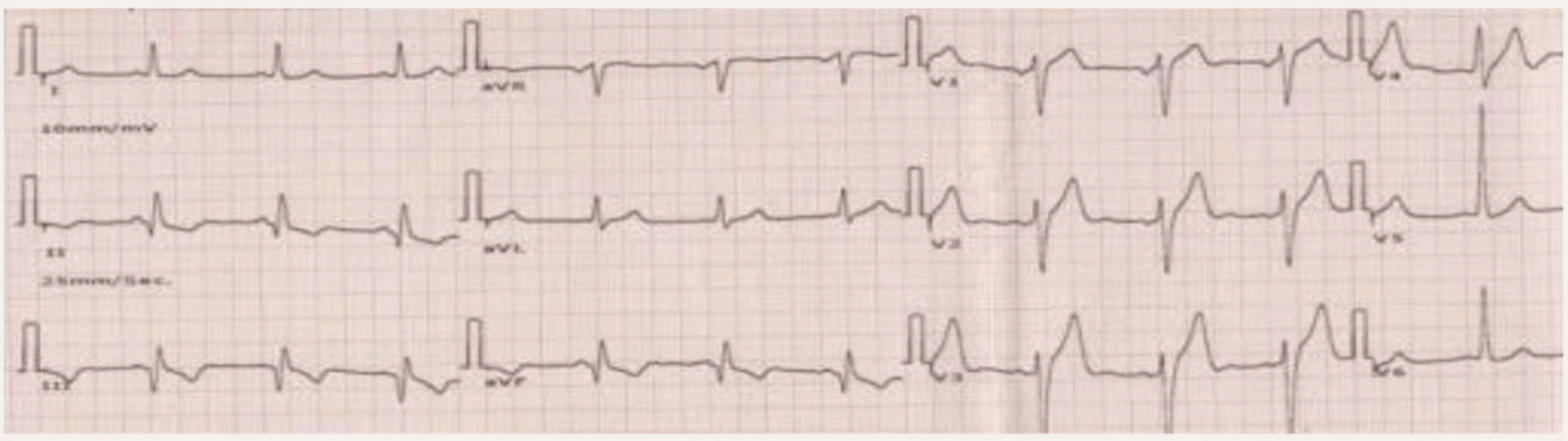
d) Aspirin

Ans:a

#which of the following isnt immaediate measure:

1. aspirin 300mg
2. LMWH
3. B-blocker
4. thrombolytic therapy
5. PCI

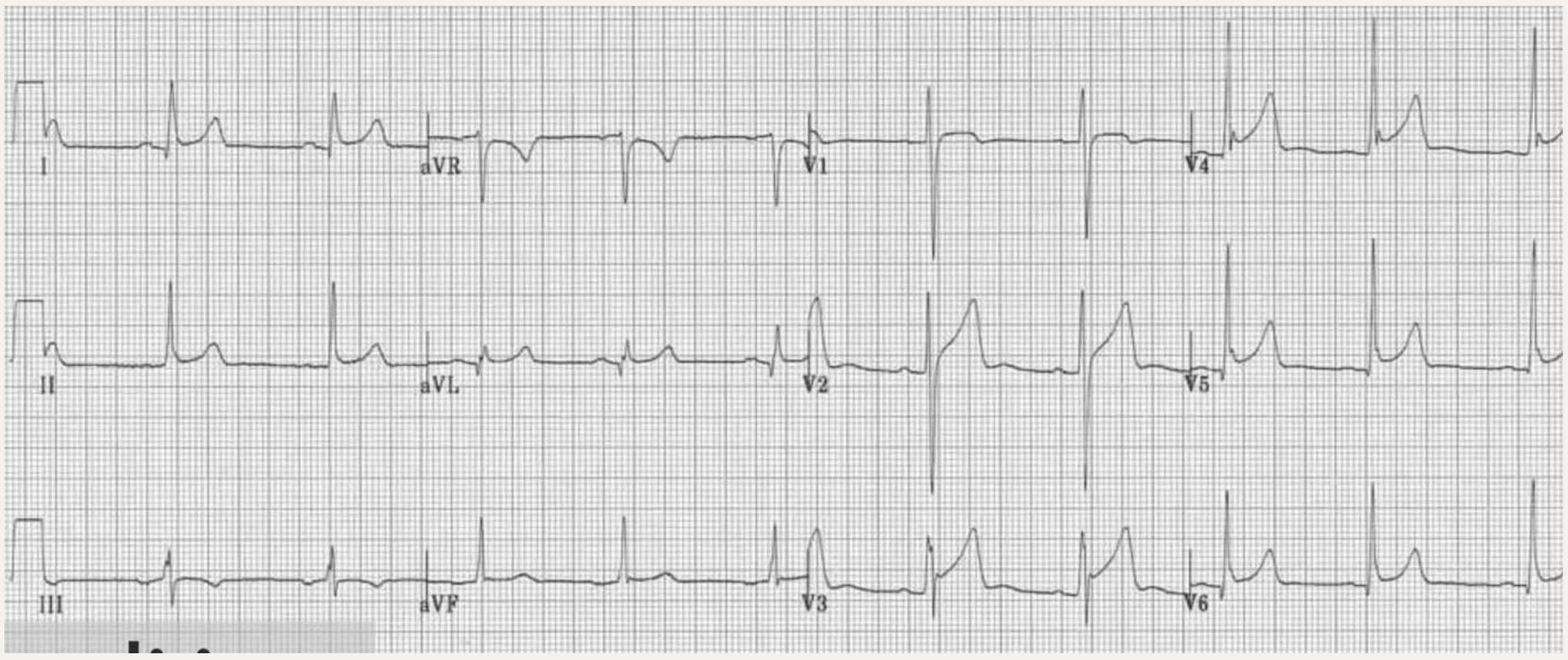
Ans:



Pathological Q waves
seen in Old MI
(ECG from Google)

Q14

ECG



1)your diagnosis
-pericarditis
2)mention 3 causes for this condition :
-uremia
-post MI
-Radiation
-Idiopathic
3)confirm your diagnosis by?
Echo
4)line of treatment ?
-uremia -> dialysis
-post MI-> colchicine + aspirin
-another causes -> colchicine + high dose of nsaid

1)2 ecg findings ?
-wide QRS
-No p wave
2)Diagnosis?
-vent tachy
3)3 lines of treatment