ECG

MCQs

- About Atrial fibrillation all except:

-most common arrhythmia
-irregular pulse
-rhythm control superior than rate control

- In hyperthyroidism Atrial fibrillation is best treated with?

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

- 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

- A27 year women suffer from mitral stenosis develop atrial fibrillation. She 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

- 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. Clopidogrel
d. Corticosteroid
e. No action

- Beta blocker may be used in RX of all the following except one:

a) Thyrotoxicosis
b) Angina pectoris
c) Migraine
d) Atrial fibrillation
e) Ventricular fibrillation
This is a life-threatening emergency that requires immediate defibrillation (electric shock) to restore a normal rhythm. Medications such as beta blockers are not typically part of the acute treatment for ventricular fibrillation.

- 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

- Not a cause of atrial fibrillation:

a. Core pulmonale
b. Alcoholic cardiomyopathy
c. Hypertension
d. Acute rheumatic fever
e. Rheumatic heart diseases

- All of the following are true in atrial fibrillation, except:

a. Presence of A wave in front of QRS in EKG
b. Presence of pulse deficit between apical rate and radial rate ≪< Wrong
c. It's a type of arrhythmia called irregular irregularly
d. ItistreatedmedicallybydigoxinandsurgicallbyMaixe operations?

- The least common ause of AF is? Or: The commonest cause of AF?

a. WPW syndrome
b. Mitral valve disease
c. Hypertension
d. Pericarditis
e. Thyrotoxicosis
Most common cause: Mitral valve disease
Least common cause: Either WPW syndrome or pericarditis (The common arrhythmia that occurs in WPW syndrome is a paroxysmal (intermittent) supraventricular tachycardia (PSVT). Other arrhythmias that can also occur include atrial fibrillation, atrial flutter and atrioventricular re-entrant tachycardia (AVRT). Rarely, another arrhythmia called ventricular fibrillation can develop)

- A 30-year-old man admitted with right sided hemiplegia.Clinical examination reveals loss of a wave in JVP with irregular irregular pulse. He has ONE of the following cardiac rhythm abnormalities.

a- complete heart block
b- atrial fibrillation
c- atrial flutter
d- sinus tachycardia
e- sinus bradycardia

- A70 hypertensive woman patient with mild left hemiparesis and finding ofperistant atrial fibrillation. Optimal treatment with anti-hypertensive drugs would be ONE of the following

a- close observation
b- permanent pace maker
c- asprin
d- warfarin
e- I.V heparin

- Irregular irregularity indicate one of the following;

a-multiple premature ventricular contraction
b-mutiple premature atrial contraction
c-atrial fibrillation
d-second degree heart block
e-sinus tachycardia

- Atrial fibrillation treated by all of the following except:

a- digoxin
b- cortisone
c- Qunidine sulphate
d- Cordarone
e- B- Blocker

- The least common ause of AF is? Or: The commonest cause of AF?

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

- Drug of choice for SVT

(IV adenosine)

- All of the following are correct regarding the anti-arrhythmic drug amiodarone, except:

a) Prolongs the plateau phase of the action potential
b) Potentiate the effect of warfarin
c) Is useful in prevention of both ventricular and supraventricular tachycardia
d) May cause corneal deposits
e) Has a significant -ve inotropic action

- What is the most common arrhythmia in Wolff-Parkinson-White syndrome?

a-atrial ectopics
b-Ventricular tachycardia
c-AV nodal re-entry tachycardia xxx
d-Ventricular fibrillation

- Which one of the following ECG changes is most typical of hyper kalemia:

a-Peaked P wave
b-Presence of U wave
c-peaked T wave ####
d-ST depression
e-Narrowed QRS complex

- 3 weeks after MI, a patient presented with chest pain. ECG showed elevated ST segment in anterior chest leads, diagnosis is:

a. Re-infarction
b. Pericarditis
c. Ventricular aneurysm with superimposed VT
Answer: C (Cause of persistent ST segment elevation is ventricular aneurysm)

- 30 year old man presented with a history of transient loss of consciousness and palpitation . his ECG showed ventricular tachycardia , which one of the following treatment should be avoided?

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

- Pt with ventricular tachycardia and after few days serum creatinine increased what type of kidney injury :

a. pre-renal
b. renal
c. post renal

- You are a junior doctor covering the coronary care unit (CCU). You are called urgently to a 45-year-old man admitted yesterday following a non- ST-elevation myocardial infarction (NSTEMI). On arrival there are no signs of life and a cardiac arrest call has been put out. The senior nurse looking after him reports he was alert and talking moments ago before collapsing.You look up at the monitor and see rapid disorganised electrical activity in lead II compatible with VF. The nurse administers the first shock of 360J monophasic. The monitor still shows V.Fibrillation.What is the next correct action?

Select one:
a. Feel for a carotid or radial pulse
b. Begin chest compressions at a ratio of 30:2
c. Begin uninterrupted chest compressions
d. Administer amiodarone 300mg
e. Give another shock

- Which of the following would not be part of your plan for the treatment of acute ventricular fibrillation?

a. Electrical defibrillation b. Lidocaine c. Epinephrine d. Bretylium e. Manganese

- Beta blocker may be used in RX of all the following except one:

a) Thyrotoxicosis
b) Angina pectoris
c) Migraine
d) Atrial fibrillation
e) Ventricular fibrillation

- Which ONE of the following should be immediately given to a patientwith ventricular fibrillation.

a-I.V amiodrone
b-I.V epinephrinr (adrenaline)
c- defibrillation at 200 joules
d- I.Vadenosine

- _In dilated cardiomyopathy one of the following is true:

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.

- Indications of thrombolytics :

(new onset LBBB)

- which of the following ECG changes is an indications for thrombolysis in a patient presenting with chest pain ?

a- New onset Left bbb
b- Q wave in any leads
c- 2 mm st depression in all chest leads ??
d- New onset right bbb
e- T wave inversion in chest leads

- 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 spetum
d. Action potential in the ventricle is rapid and generated by rapid transmembrane K diffusion.

- fixed splitting of the second heart sound occurs in one of the following :

a-left bundle branch block
b- Atrial septal defect
c-hypertension
d-aortic stenosis.
e- left ventricular outflow obsruction

- All of the following are ECG findings in acute inferior STEMI:

a. Sinus tachycardia
b. Sinus bradicardia
c. Second degree Mobits type two AV block. d. Junctional rhythm
e. LBBB

- Case of 2nd degree heart block treament of choice : pacemaker ??!!

- Hyperkalemia ECG except :

-ST depression
-peaked T wave
-flat p wavs
-T wave inverted ✅?

- A 43-year-old woman is evaluated for a 1-month history of chest discomfort. She states that she experiences a vague pressurelike sensation in her chest that occurs intermittently, with each episode lasting less than 5 minutes. She has had approximately two episodes each week, and several have seemed to be associated with exertion but also appear to have resolved after taking antacids. Her medical history is significant for hypertension. Her only medication is lisinopril. She is a current smoker with a 15- pack-year history. Family history is negative for coronary artery disease. On physical examination, the patient is afebrile, blood pressure is 132/78 mm Hg, pulse rate is 85/min, and respiration rate is 12/min. BMI is 32. Cardiopulmonary examination is unremarkable, as is the remainder of her physical examination. An electrocardiogram shows sinus rhythm, normal PR and QRS intervals, and no ST-segment or T-wave abnormalities or Q waves. An exercise electrocardiographic treadmill test is performed. The patien is able to exercise for 4 minutes to a heart rate of 82% of the maximum predicted and the study is discontinued because of fatigue. Testing did not reproduce her symptoms, and there were no significant electrocardiographic changes with exercise. Which of the following is the most appropriate next step in management?

Select one:
a. Cardiac catheterization
b. Pharmacologic stress testing
c. Switch lisinopril to metoprolol
d. Clinical observation
e. ECG and echocardiography

- pericarditis the chracterstic EKG changes ;

A:T wave invertion*

- All are present on ecg for hyperaklemia except :

(prominent p wave)

- Wrong about hypokalemia on ECG >>

Delta wave

- Wrong statement about T wave:

a. Can be inverted in all leads in pericarditis ??
b. Always abnormal if inverted in V2
c. Always abnormal if inverted in V5
d. Can be normally inverted in V1 in 20% of population.
e. Can be found in NSTEMI

- All the following ECG findings are found in hypokalemia Except.

Flattened T waves
U waves
Shortened QT interval
ST segment depression
Ectopic beats

- A 72-year-old woman is evaluated in the emergency department for progressive chest pain that began 2 hours ago. She has not had recent surgery or stroke. She takes amlodipine for hypertension. On physical examination, blood pressure is 154/88 mm Hg, and pulse rate is 88/min. Cardiac and pulmonary examinations are normal. Initial electrocardiogram shows 2-mm ST- segment elevation in leads V1 through V5 with reciprocal ST- segment depression in leads II, III, and aVF. Chest radiograph shows no cardiomegaly and no evidence of pulmonary edema. The patient is given aspirin, Clopidogrel, unfractionated heparin, and a ß-blocker. Because the nearest hospital with primary percutaneous coronary intervention capabilities is more than 120 minutes away, she is also given a bolus dose of tenecteplase. Thirty minutes later, the patient's blood pressure has dropped to 85/58 mm Hg. Her chest pain persists, and she rates the pain as 8 out of 10. Pulmonary crackles are auscultated to the scapulae. Electrocardiogram shows 3-mm ST-segment elevation in leads V1 through V5 with reciprocal ST- segment depression in leads II, III, and aVF. Which of the following is the most appropriate management?

a. Continued medical therapy
b. Glycoprotein IIb/IIIa inhibitor
c. Repeat tenecteplase
d. Transfer for emergency percutaneous coronary intervention ??
e. Urgent CABG

- ECG with ST elevation in lead 2, 3,avf : right Ventricular infarction

جواب الارشيف !

I think inferior MI 😐

- patient presented to the clinic 5 days post STEMI , he complained of pleuritic chest pain increased when lying down friction rub , ECG showed diffuse ST- elevation what is the DX?

A. STEMI
B. Dressler syndrome
C. Myocarditis
D. PE
E. Pneumonia

- History of a man with retrosternal chest pain. ECG reveals ST segment depression in I and aVL, diagnosis:

a. Posterior MI
b. Inferior MI
c. Lateral MI

- Patient with history typical of MI. Found to have ST segment depression in leads aVF, V2, and V3. Pulmonary capillary wedge pressure is normal. Right ventricle pressure is 65/20. Right atrial pressure is 25/10. Neck veins are distended. Diagnosis is:

a. Mitral valve prolapse
b. Right ventricular infarction

- In acute MI< all of the following are true, except:

a. Inf MI, St elevation in 1, 2, AVF
b. Anteroseptal MI – ST segment elevation in V1-V2-V3
c. In acute MI, thrombolytic therapy achieve 100% reperfusion arate.
d. Treatment of MI include morphine, coronary vasodilation, aspirin.
e. Cardiac markers in acute MI, serial cardiac enzymes, like CPK, troponin. Answer: C (reperfusion rate 100%? Fee eshee bel6eb 100%)...

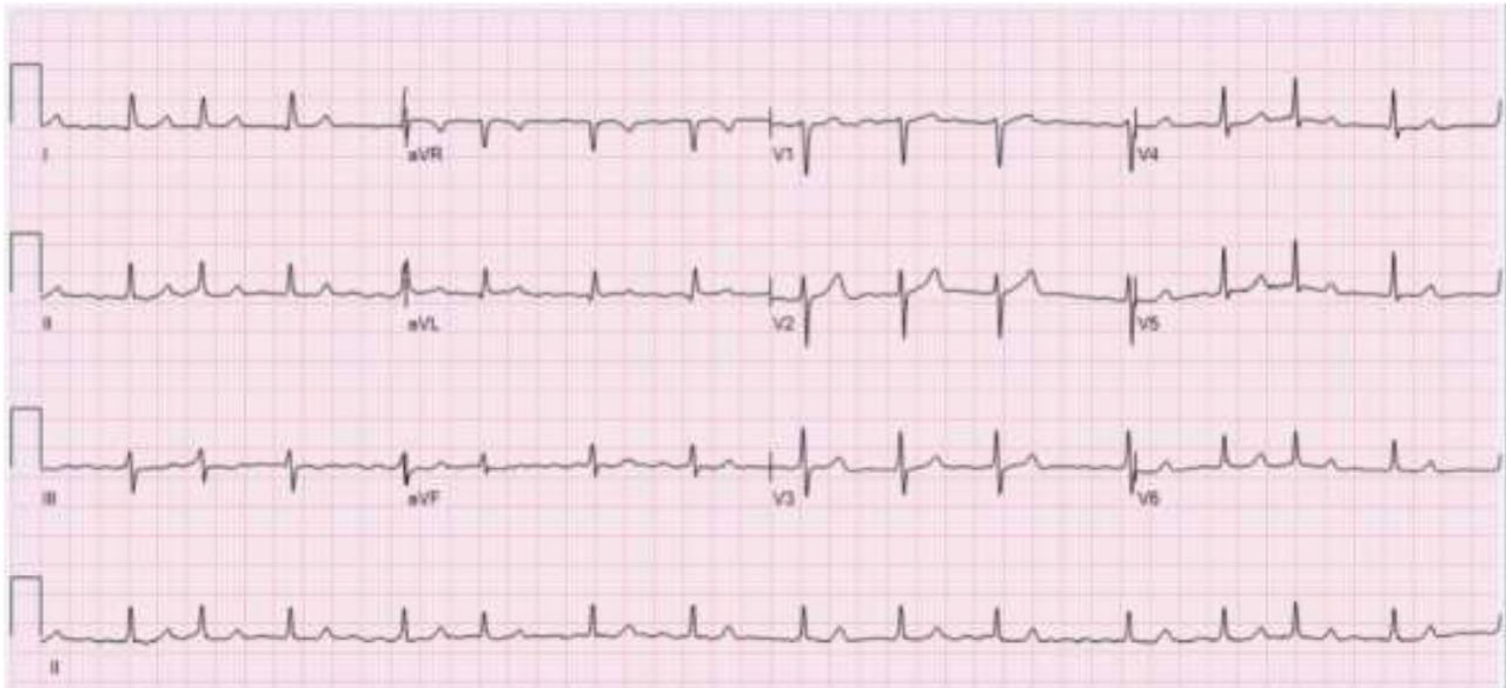
- **Which of the following is associated with ST elevation on the ECG?**

a-Right ventricular hypertrophy b-Left ventricular hypertrophy c-Digoxin effect d-Subendocardial infarction
e-Early in repolarization after angina attack xxx

- **False about non-STEMI ??**

normal cardiac enzyme

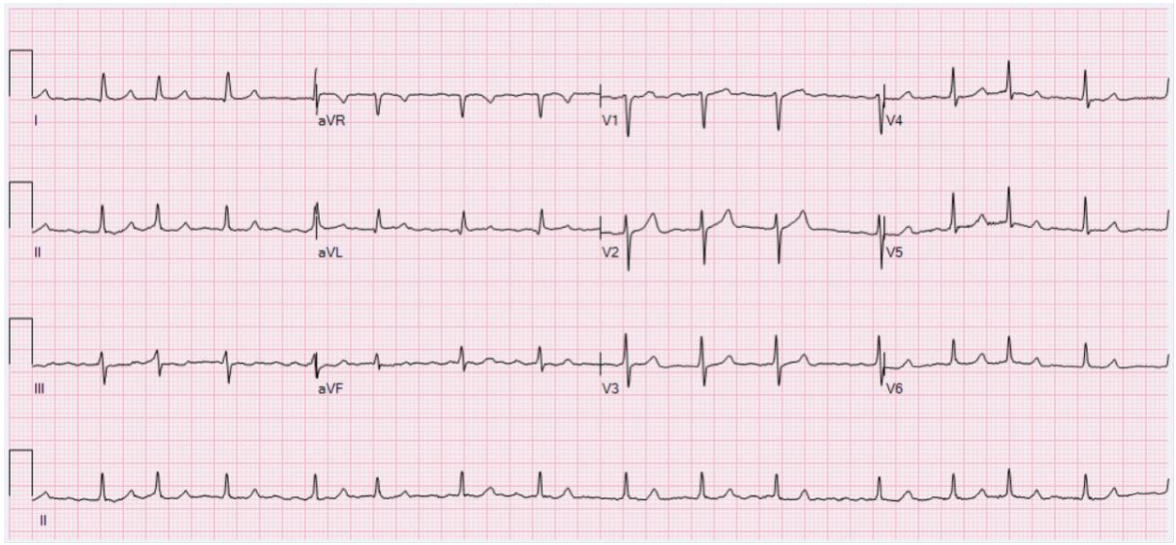
Mini-OSCE



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)



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

- what medication you would give him ?

a) Beta blockers

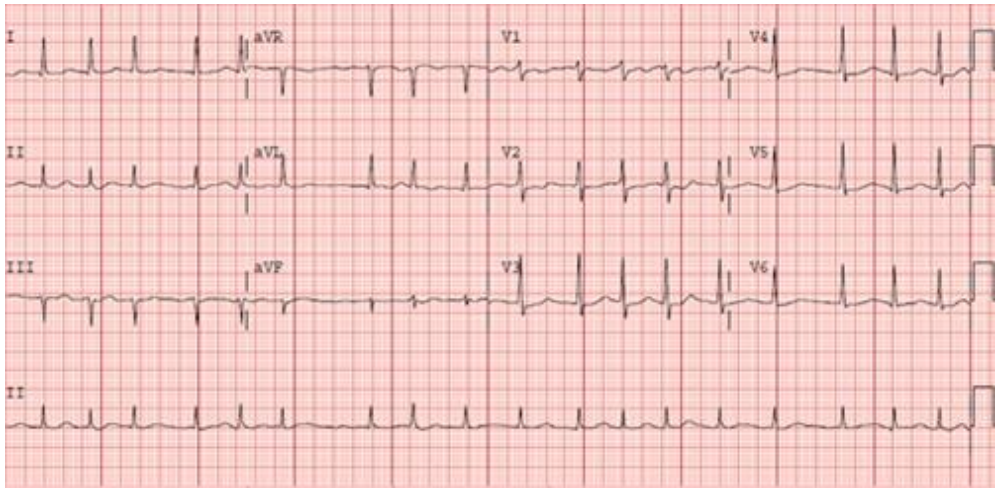
b) Anticoagulant

c) CCBs

d) Aspirin

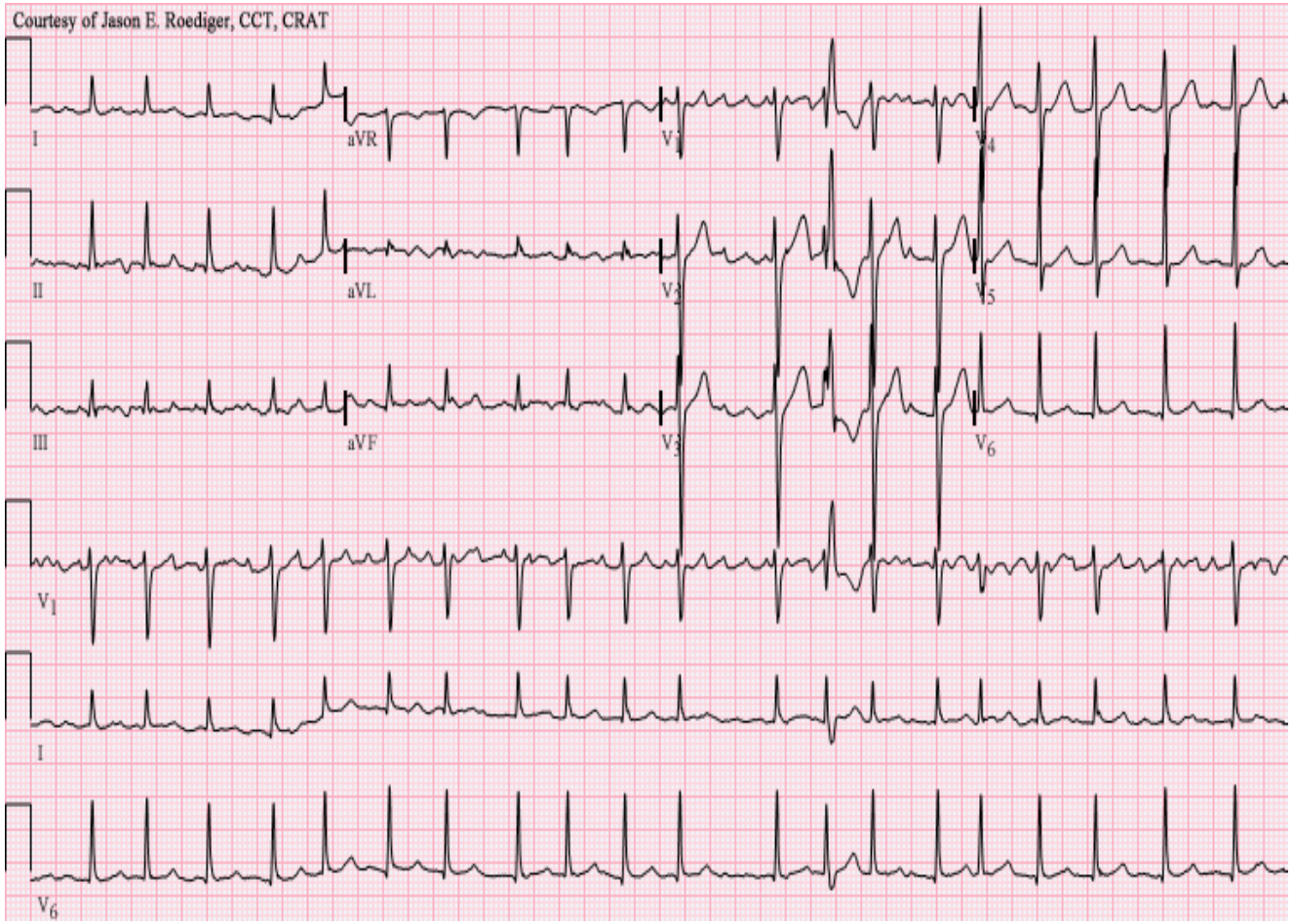
Q2

- 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
  - (المفروض في تفاصيل اكثر للسؤال حتى امشي على approach Afib Mx)



Q9 : the diagnosis of this ECG ?

- Ventricular tachycardia
- SVT
- **Atrial fibrillation**
- WPW

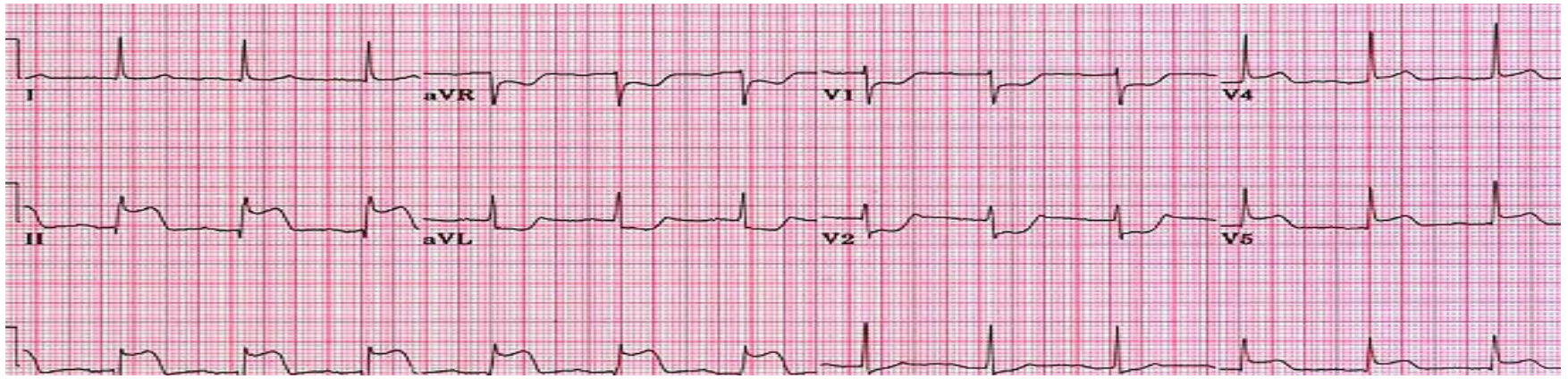


- **NOTE :**

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

Q 12 , 13

(pic 1)



(pic 2)

•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 ?

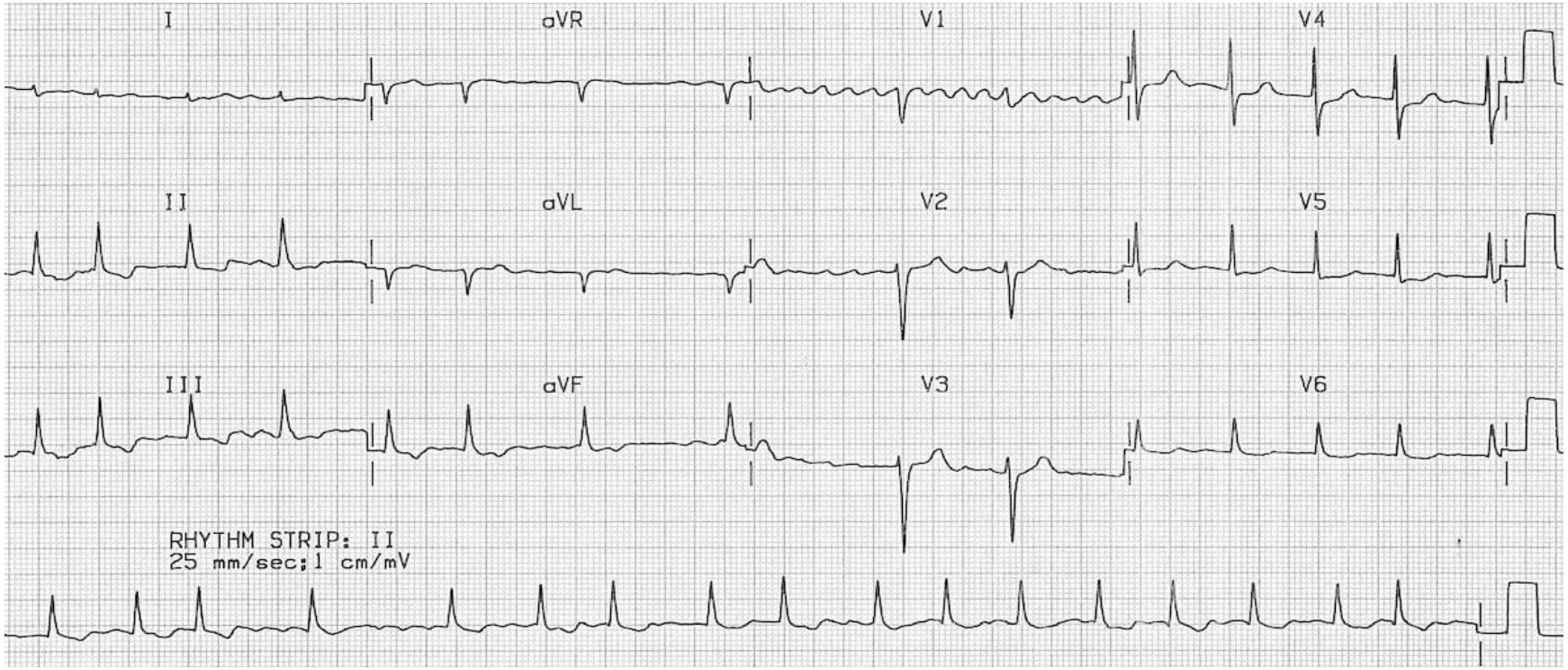
Acute inferior wall ST elevation MI

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

Atrial fibrillation

Station 3

Patient presented with palpitation & the following ECG

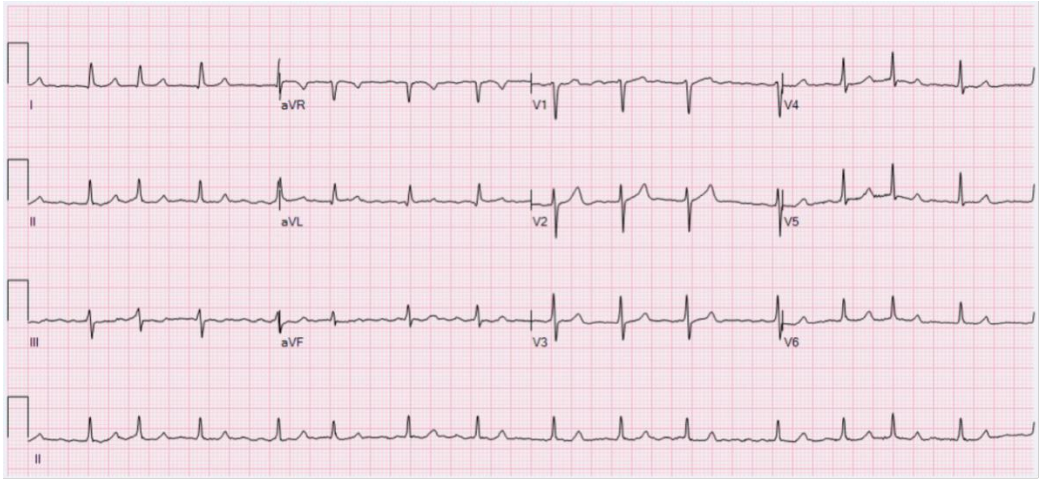


Q_1 : what are the findings?

No identifiable P wave , irregular RR interval

Q_2 : 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?

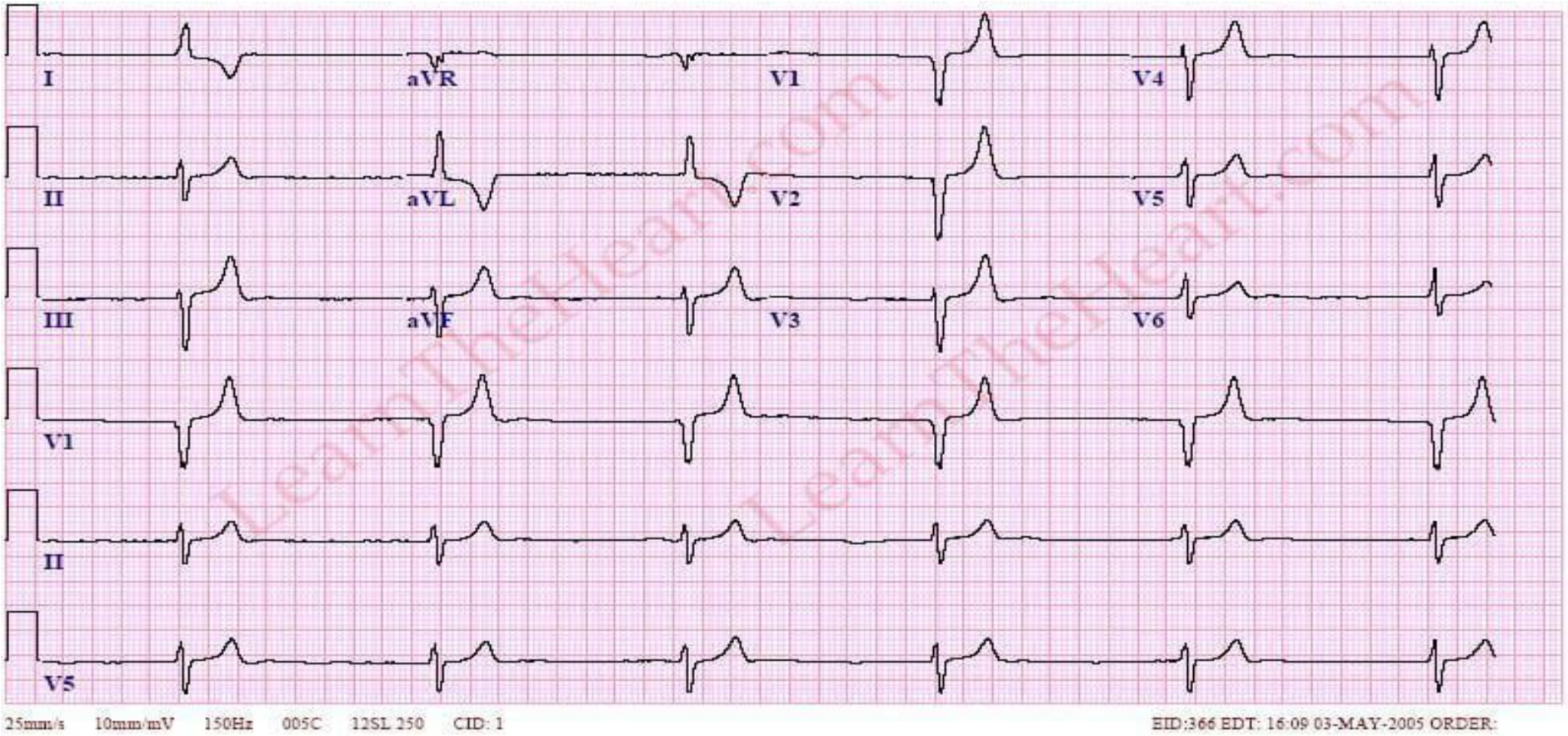
1- hyperthyroidism

2- mitral stenosis

Q3 \ what is the treatment of choice?

cardioversion & foci ablation

Station 3



Finding : hyperacute T wave

Caused by : hyperkalemia

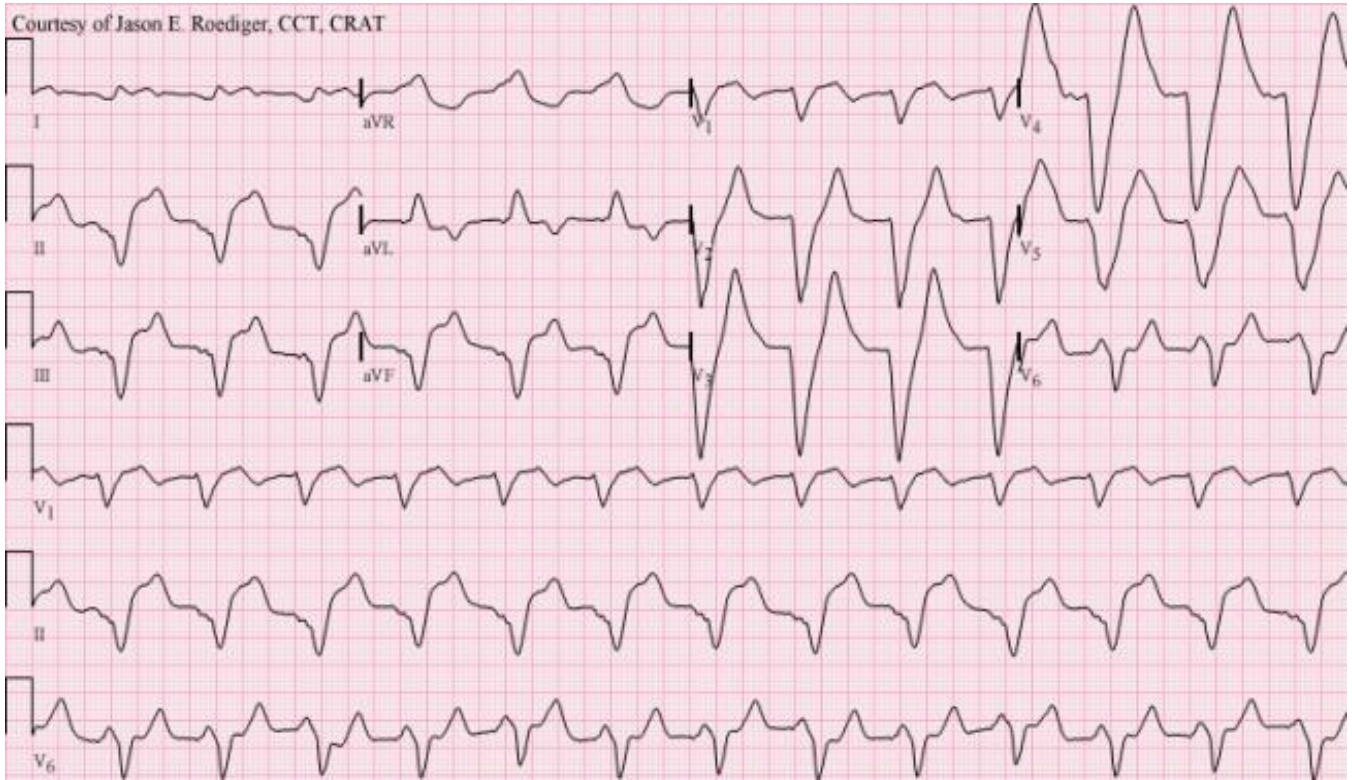
Station 7

Q1: mention 2 abnormalities in ECG ?

- T-inversion
- Wide QRS

Q2 : what is your DX?

hyperkalemia



Station 8

Post parathyroidectomy pt. with this ECG :

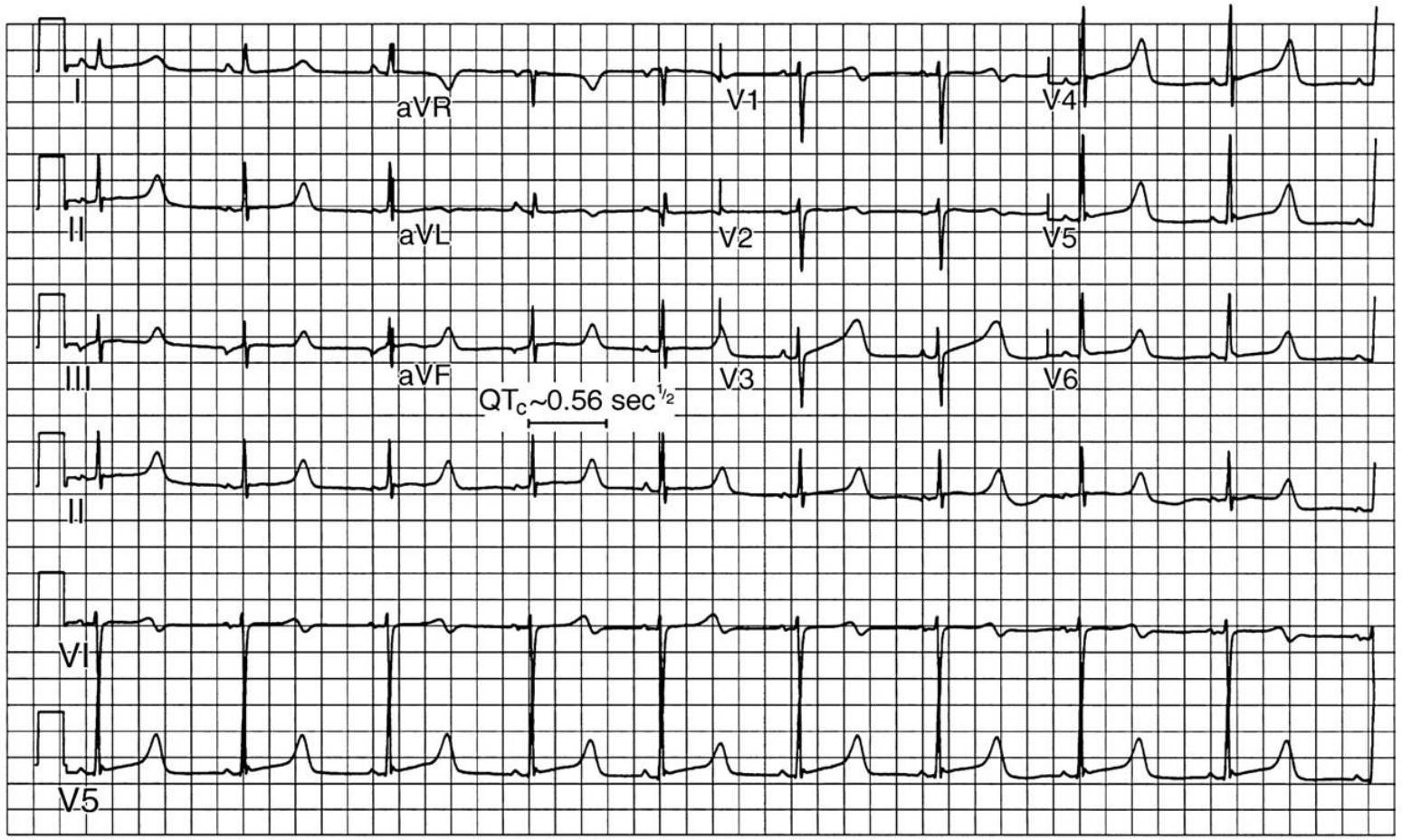
Q1 :Mention abnormality

- Long QT interval

Q2: mention 3 conditions are associated with this ECG?

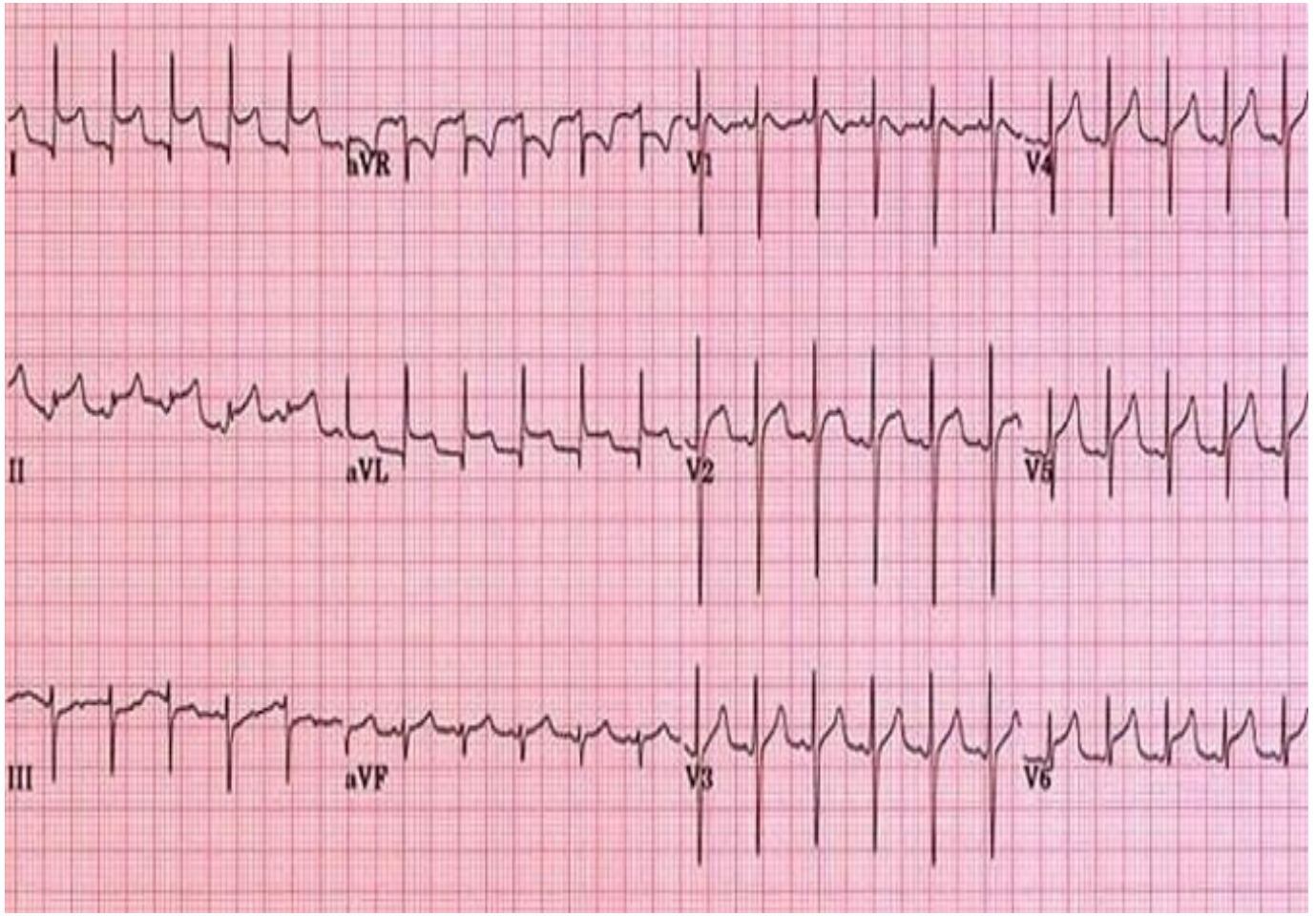
- hyperphosphatemia
- Hypocalcemia
- Hypomagnesemia

NOT SURE :/



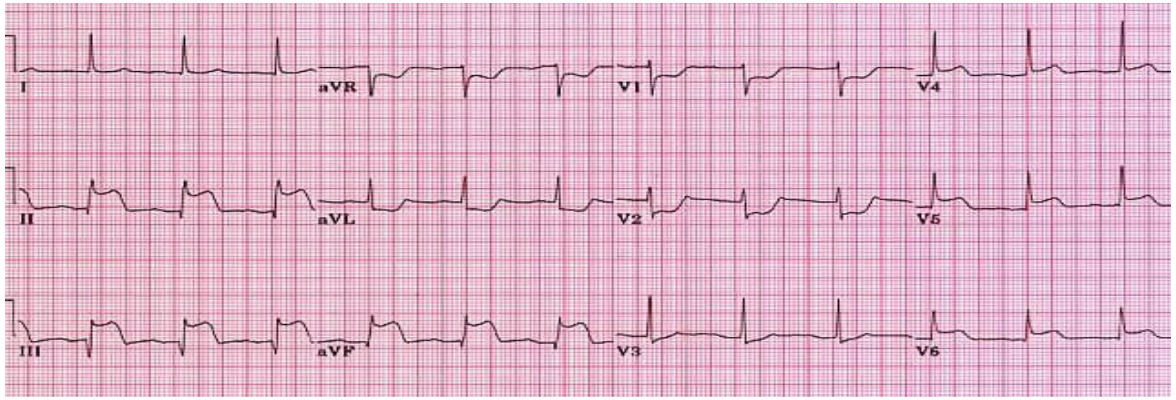
Q7 : the cause of this ECG ?

- Atherosclerosis
- Coronary occlusion
- Viral infection



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

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

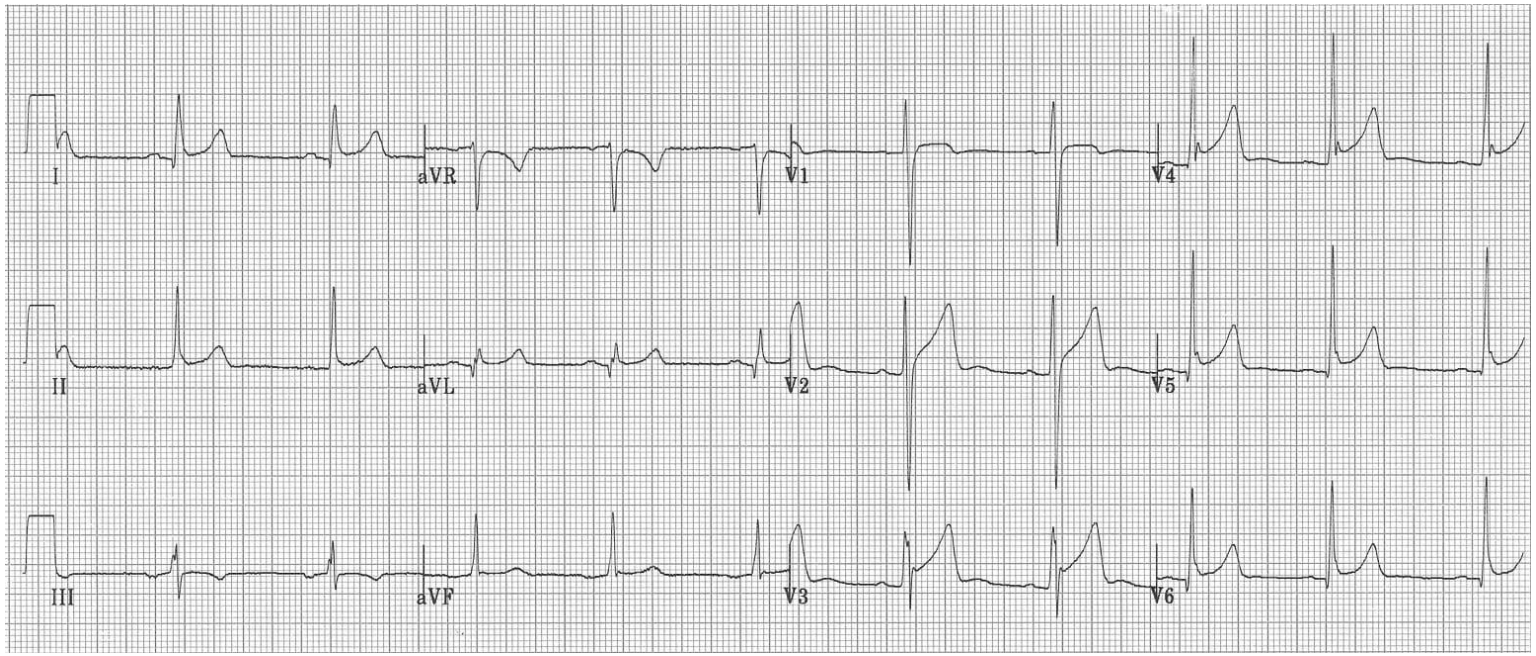
بس كونه اقل من 90 دقيقة حطوا cath

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

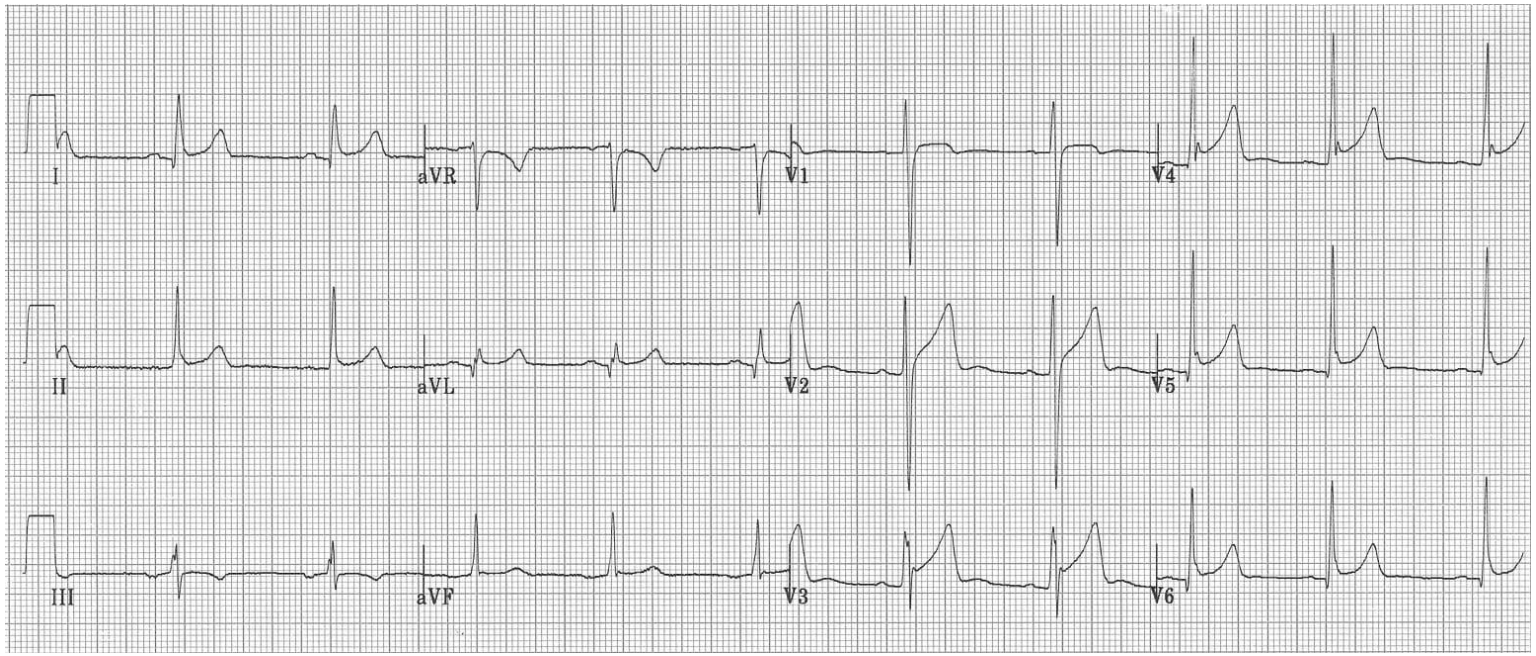
Q1: patient came with chest pain and flu-like symptoms. What is the most likely diagnosis:

- Inferior MI
- Pericarditis
- Atrial fibrillation

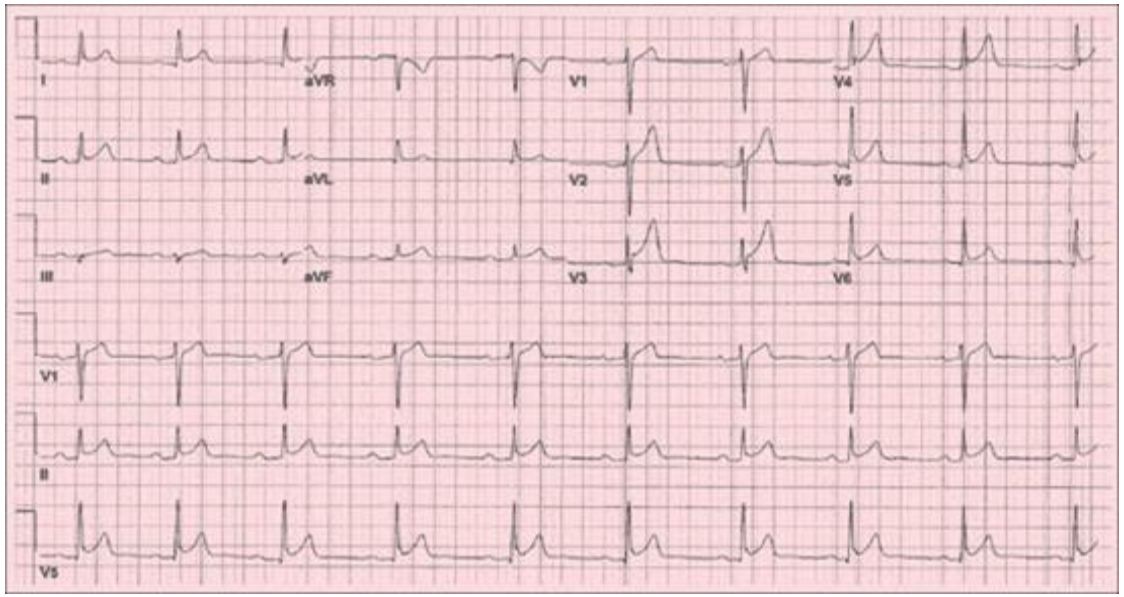


Q2: patient came with chest pain and flu-like symptoms. The proper management is:

- Anti-platelet
- NSAIDs and colchicine
- observation



Station 1



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

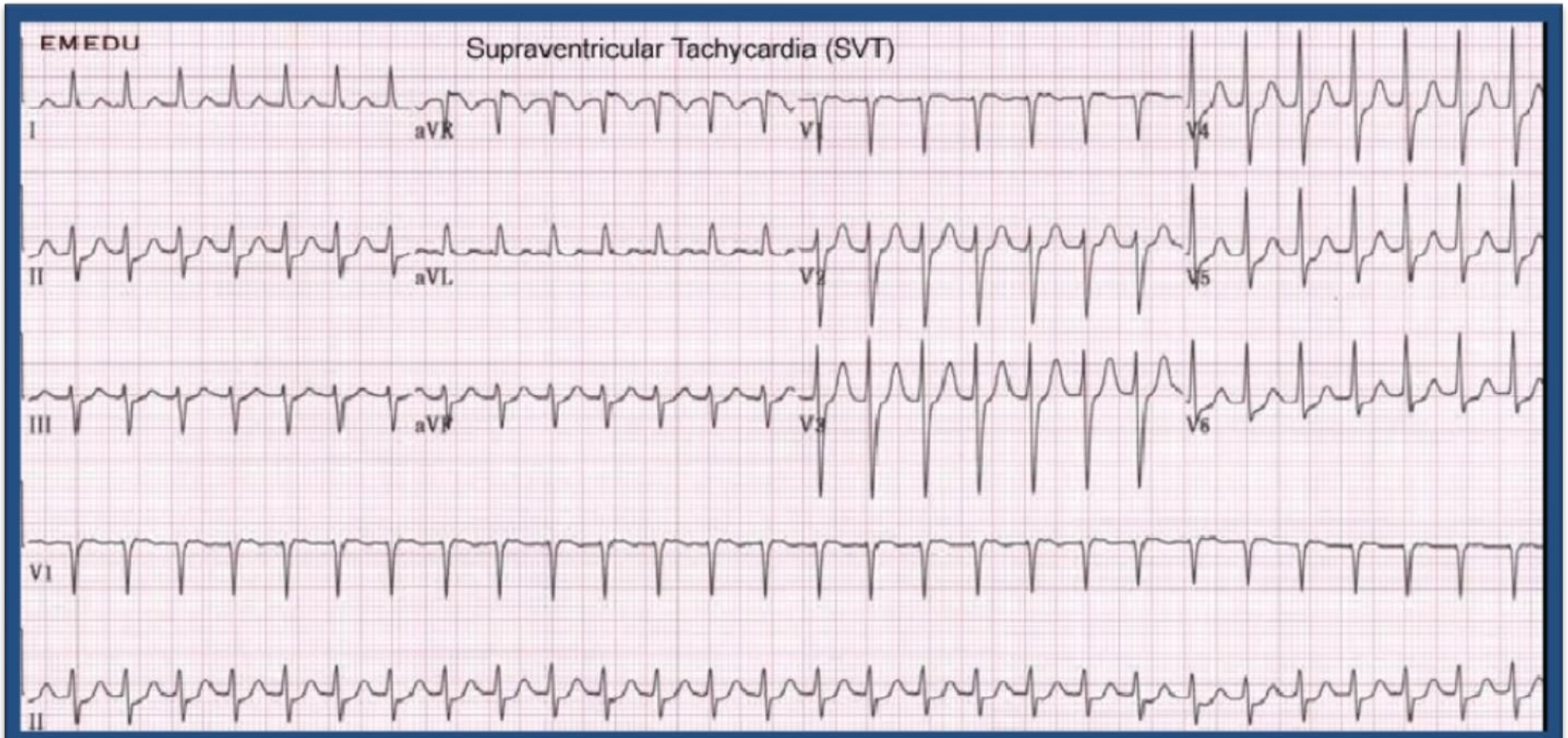
1) What is the treatment?

NSAIDs –glucocorticoids-colchicine – treat underlying cause

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



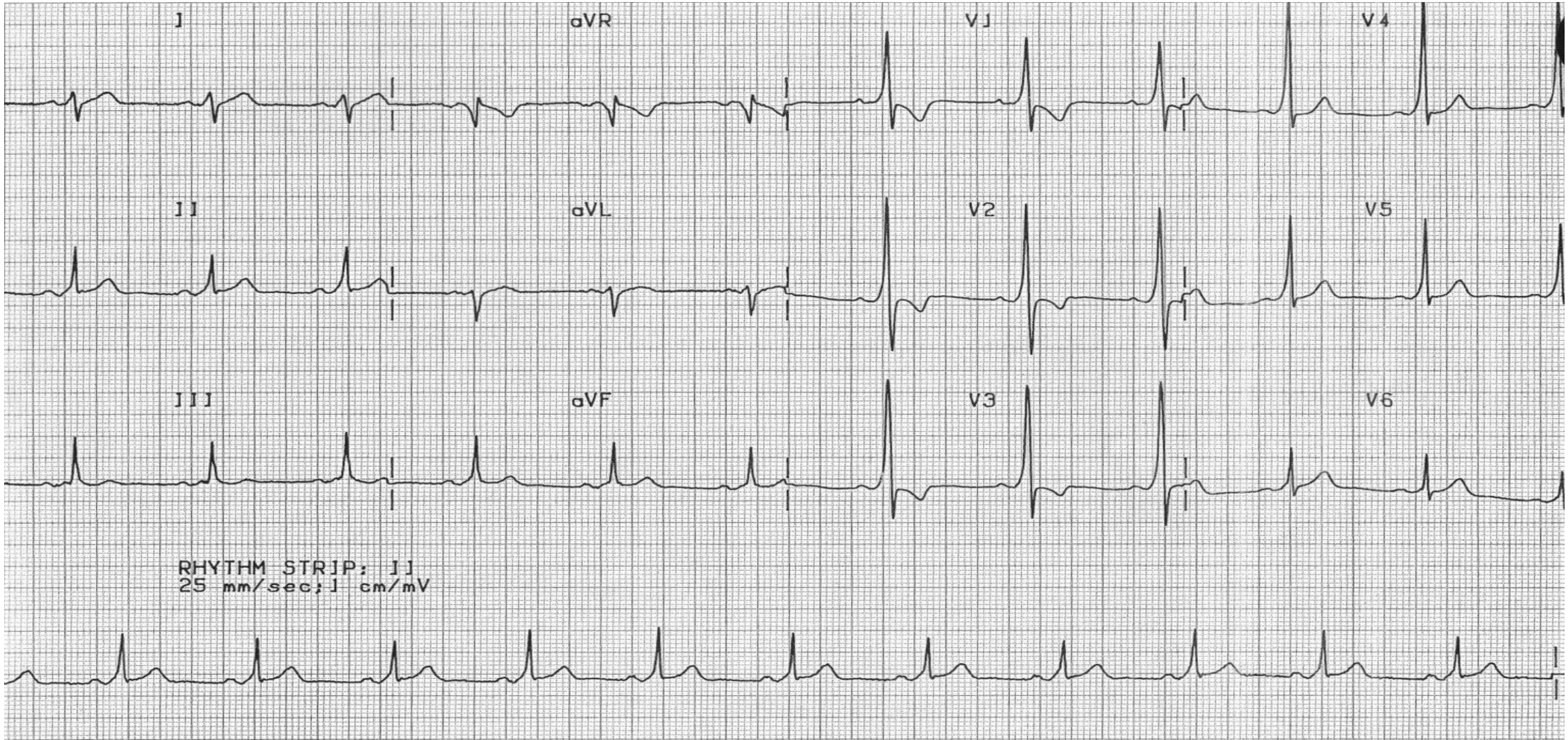
Station 9

Q1 : Dx ?

WPW

Q2 : Tx ?

percutaneous ablation of the accessory bundle

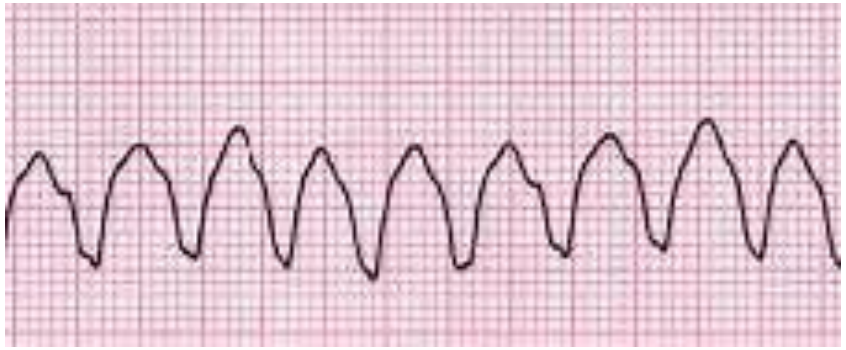


case 3 : 60 years old patient presented with severe palpitations , ecg shown in the picture :

ventricular tachycardia

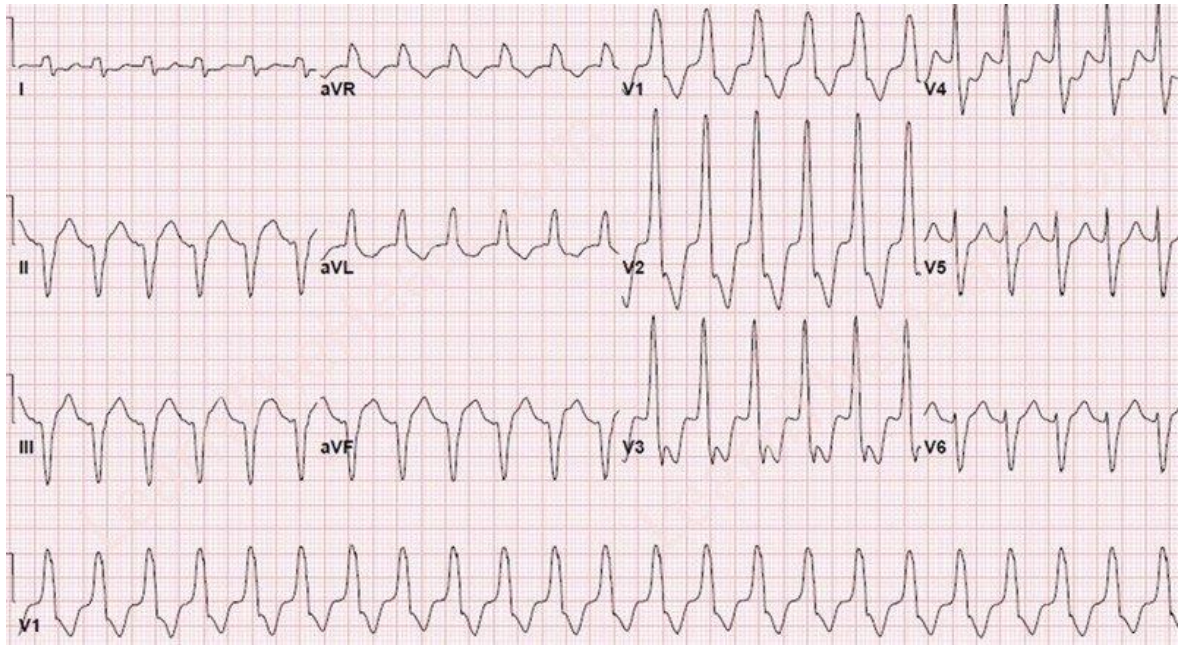
the first line treatment of this patient (he is hemodynamically unstable)

Immediate synchronous DC cardioversion



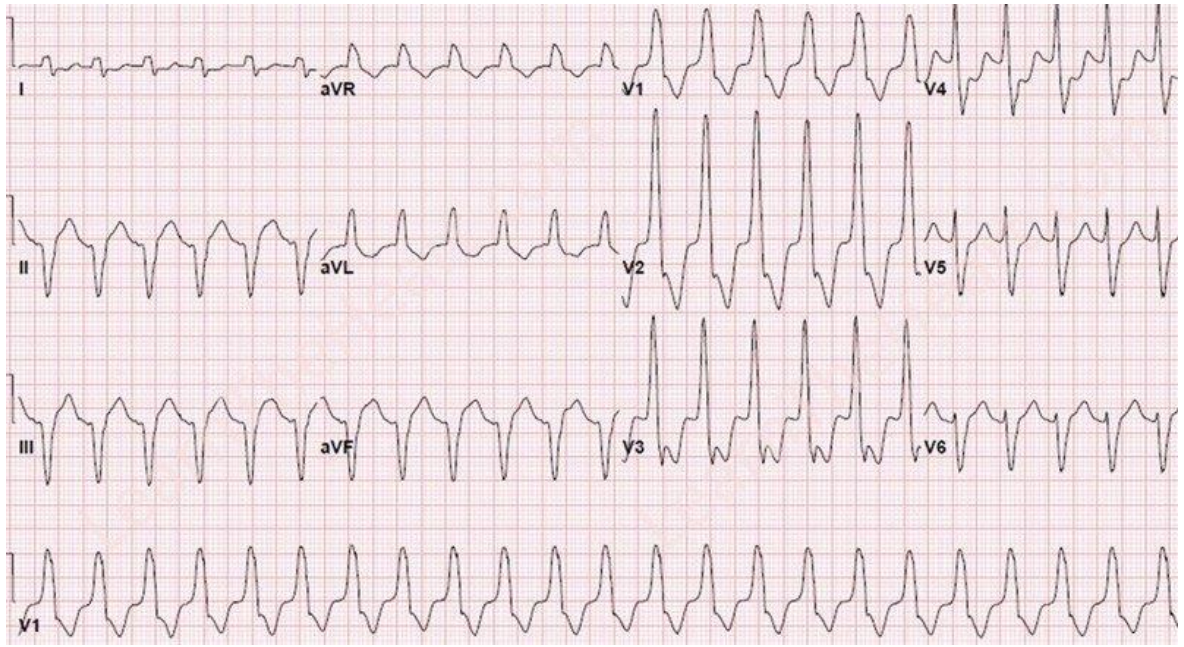
Q3: patient came with chest pain and blood pressure 90/50 . What is the most likely diagnosis:

- SVT
- Monomorphic ventricular tachycardia
- Atrial fibrillation



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

- Amiodarone
- Immediate synchronous DC cardioversion
- aspirine



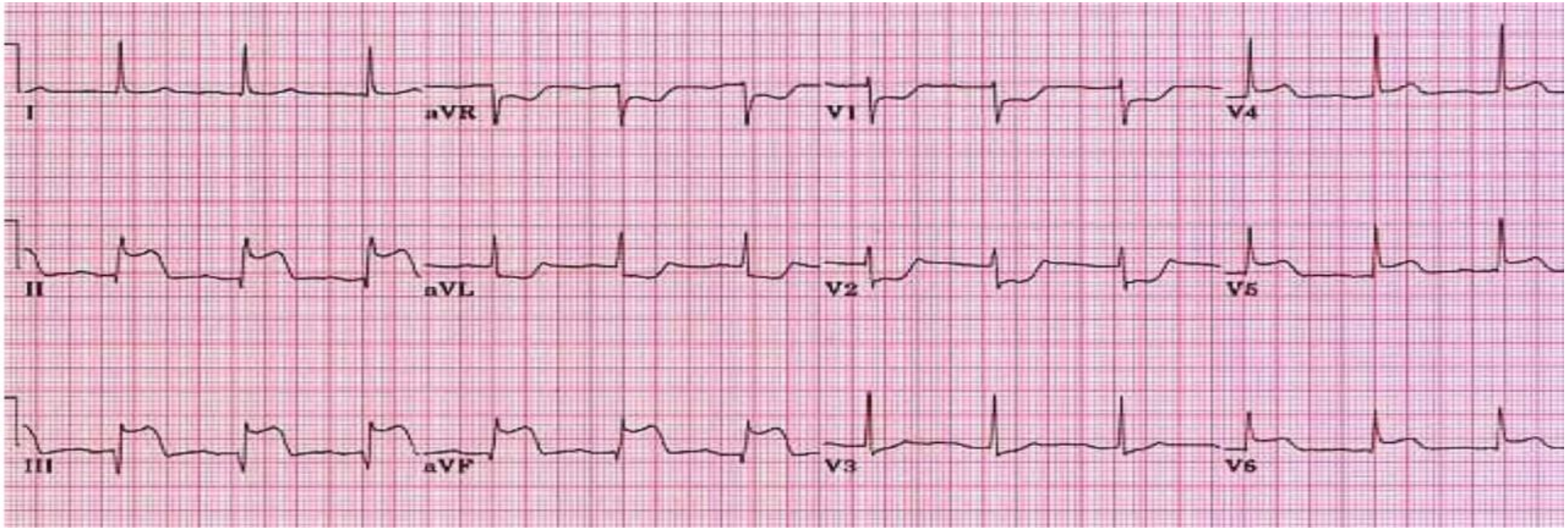
Q3

Q1: Dx:

Mobitz 2

Q2: TTT:

Pacemaker



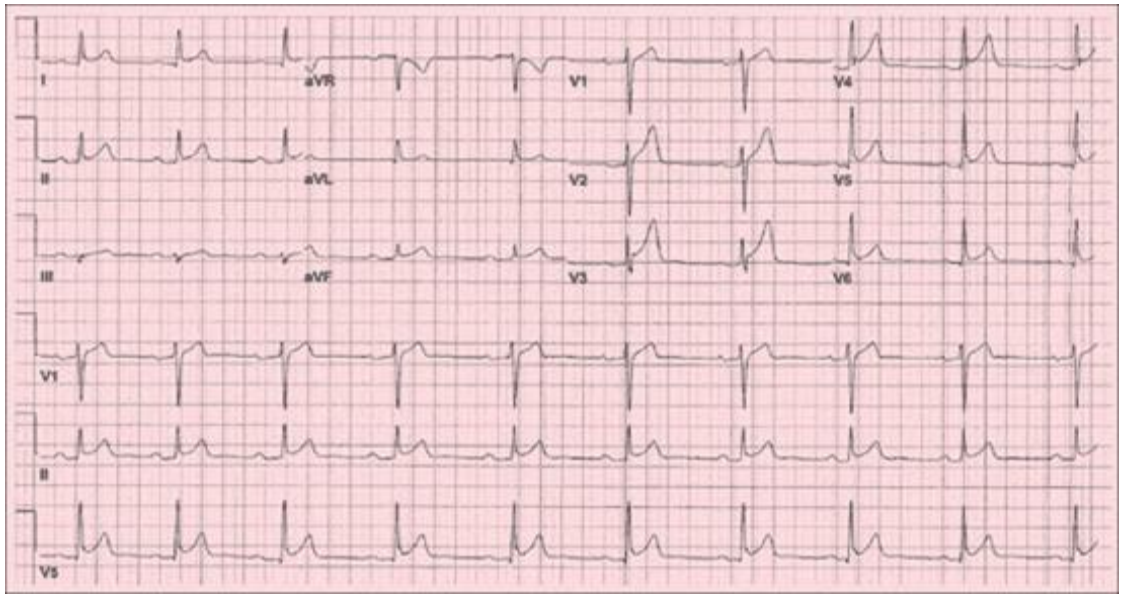
1)what is your diagnosis (inferior MI)

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 (o2, antithrmboltic ,aspirin, PCI

Station 1



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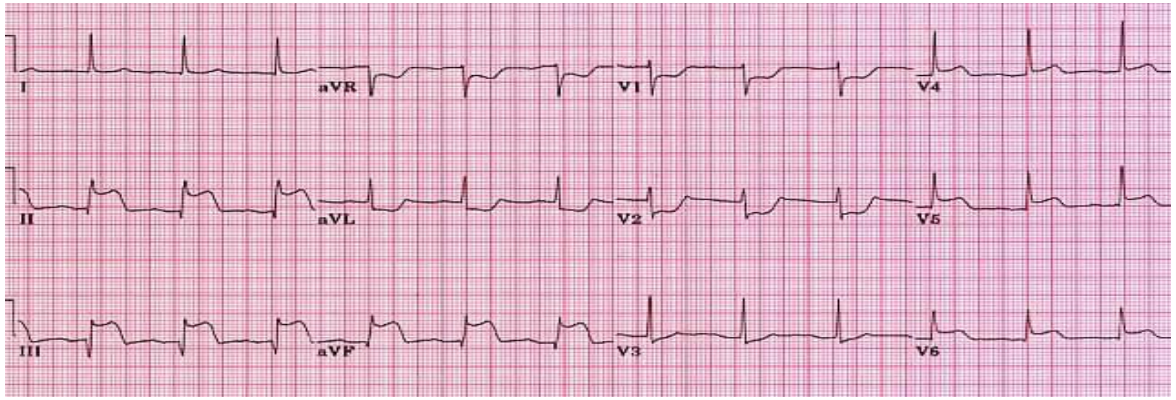


Q1 \ what is the diagnosis?

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 اقل من 90 دقيقة حطوا cath

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

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 ?

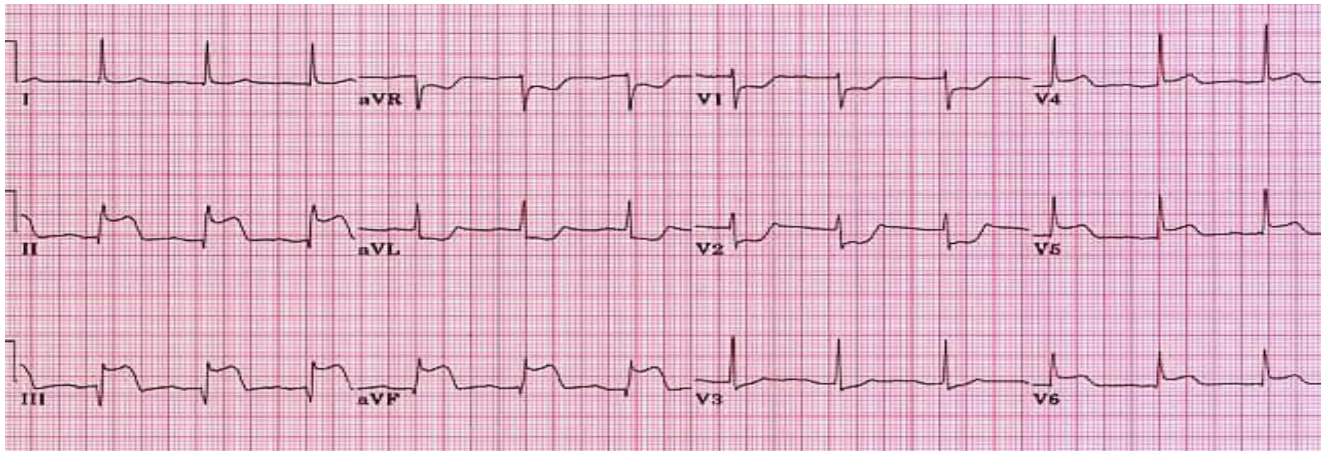
a) Cardioversion

b) Nitrate

c) ACE inhibitor

d) Aspirin

Note :
1) BBs is C/I in Inferior MI.
2)Nitrate is C/I in inferior MI, If right ventricles is failure.



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

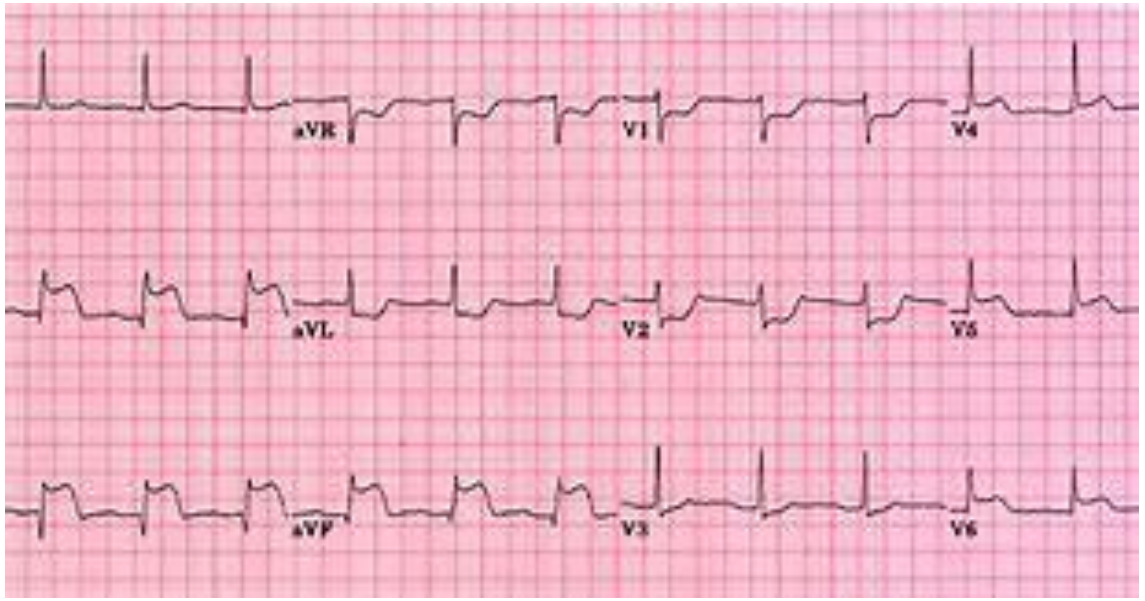
2- anteroseptal MI

3-Hypertrophic cardiomyopathy

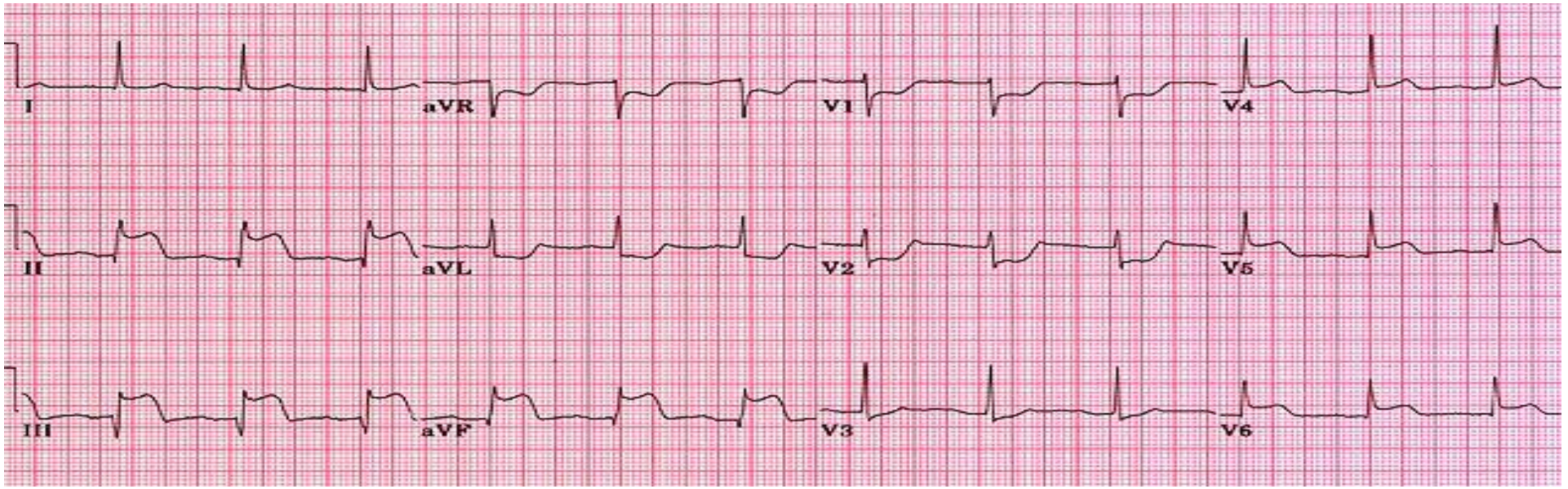
4-posterior MI

#which of the following isnt immaediate measure :

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



Station 1



Acute inferior wall st elevation MI

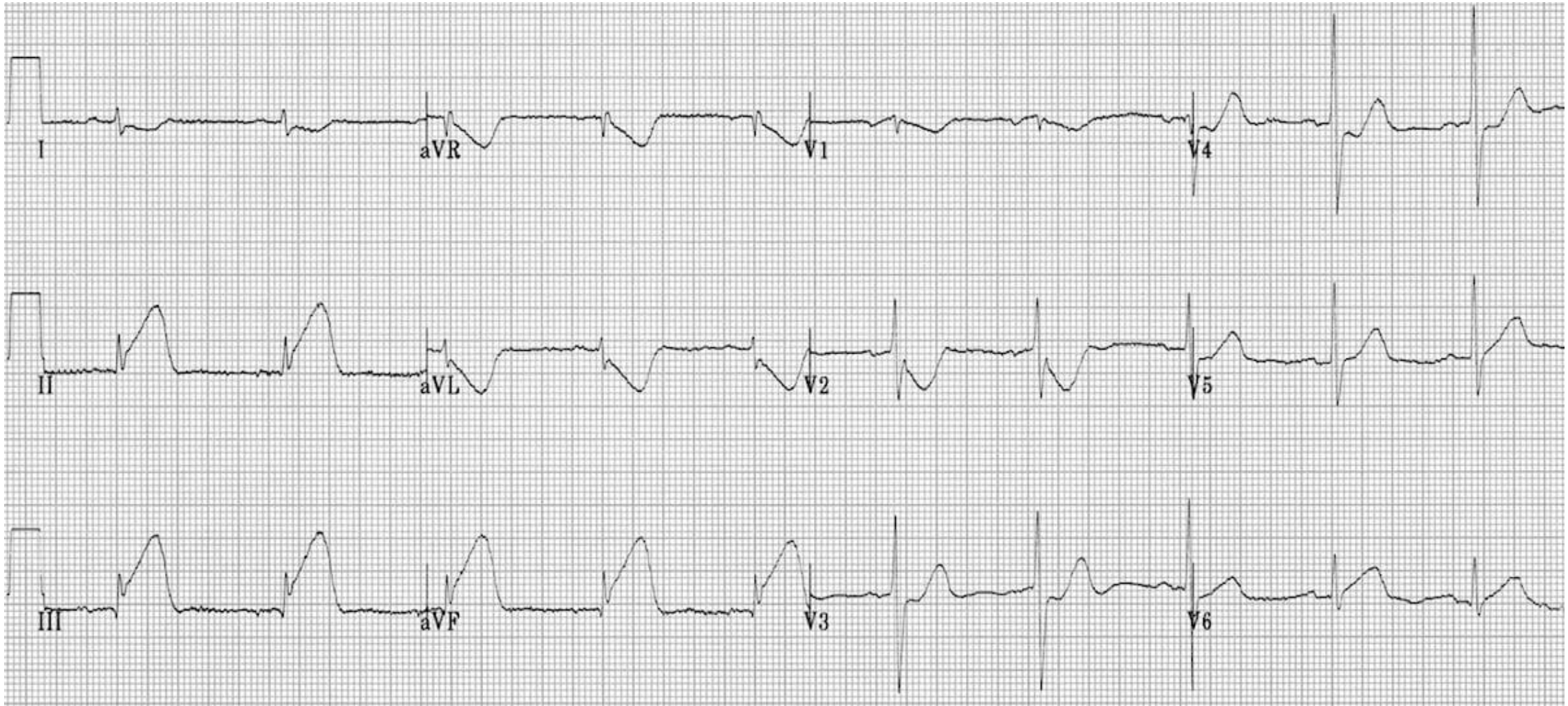
Pathological Q waves
seen in Old MI
(ECG from Google)

Q14

Q5

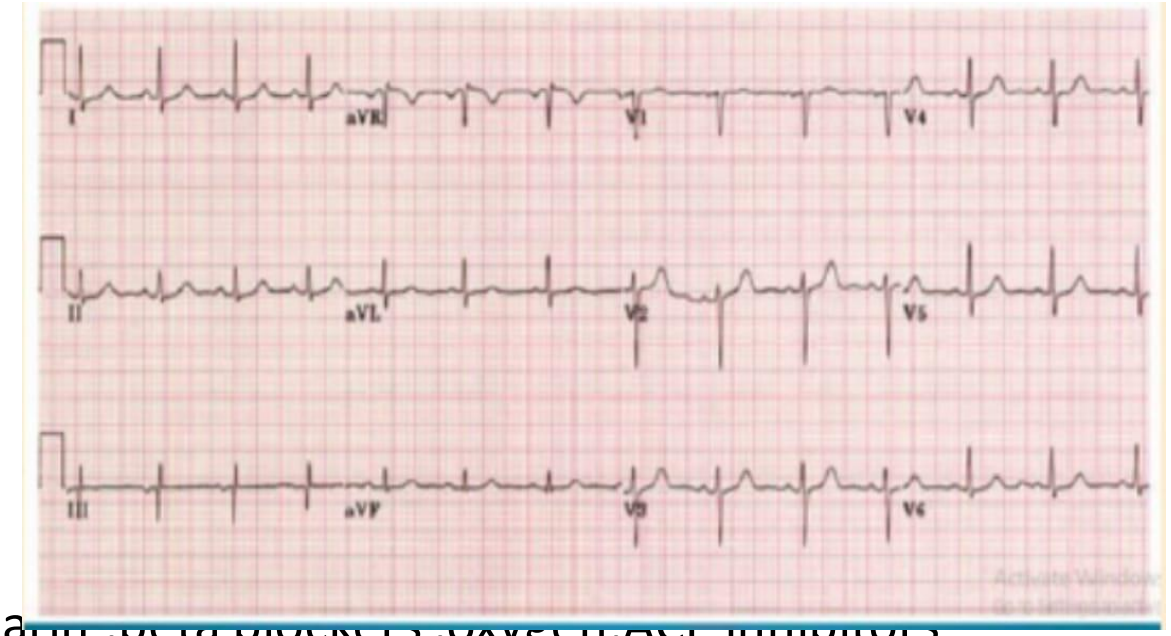
Q: Dx ??

- inferior STEMI



Station 12: Patient presented with chest pain … he had elevated CKMB …

1) Describe the ECG?



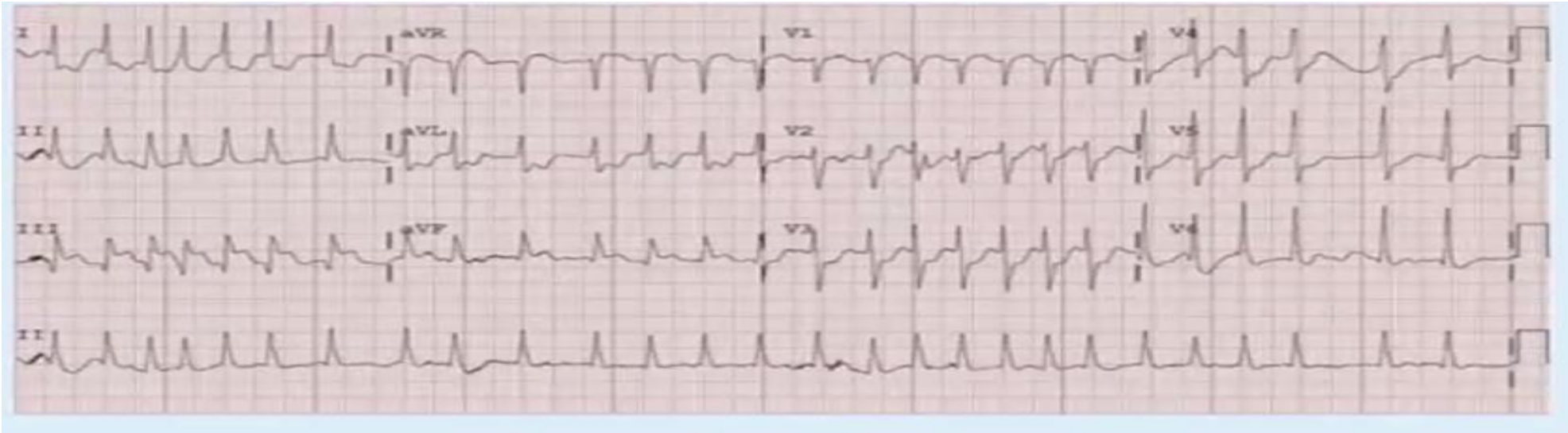
1) What is your diagnosis?

Non-STEMI

1) What is the treatment ؟ aspirin,heparin ,beta blockers ,oxygen,ACE inhibitors

aspirin,heparin ,beta blockers ,oxygen,ACE inhibitors

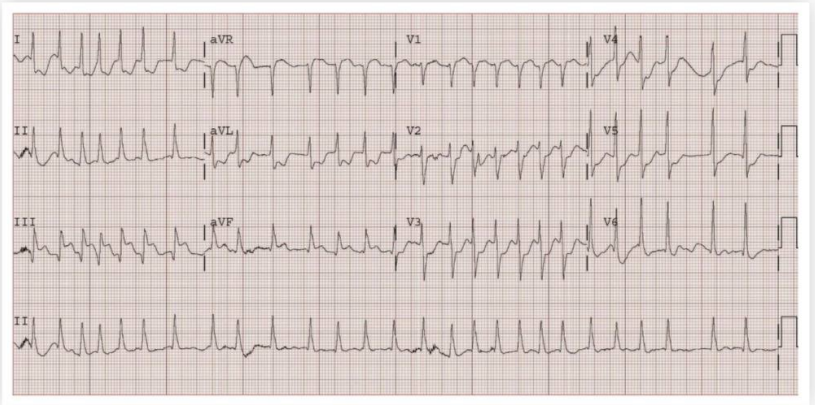
15-Your ECG diagnosis of this 55 year old female with chest pain is ?



a. **Inferior MI ????**
b. Unstable angina
c. Atrial fibrillation
d. 2nd degree heart block
e. Anterolateral MI

Atrial fibrillation with rapid ventricular response with ECG injury pattern

This elderly woman presented hypotensive, pale, and tachycardic. Here is the initial ECG.



There is an irregularly irregular rhythm (atrial fibrillation) with a very fast ventricular response. There is an injury pattern, with ST elevation in II, III, aVF, reciprocal ST depression in I and aVL, and ST depression of posterior injury in precordial leads.