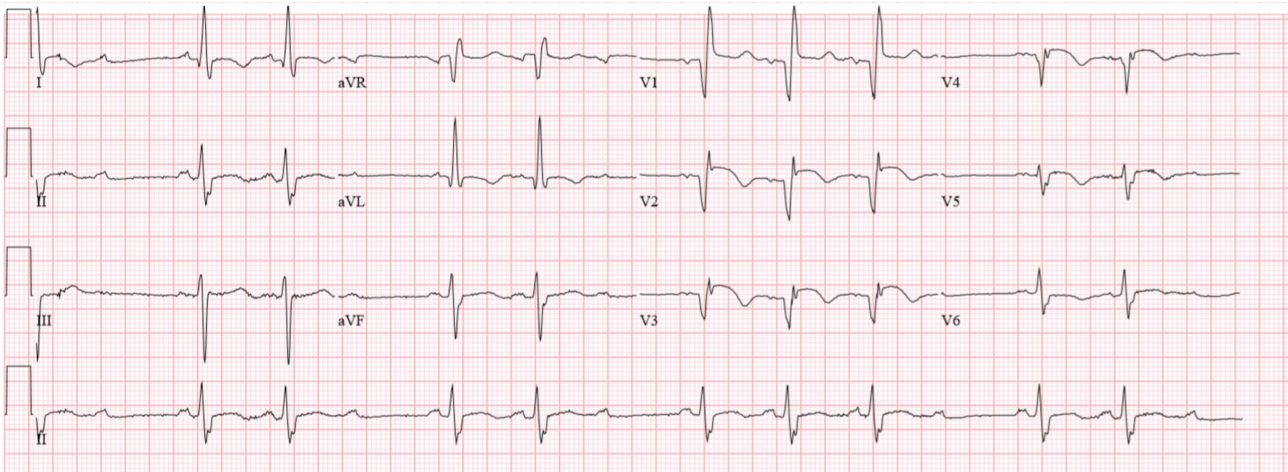


ECG Question (6 minute Question 12 marks)

You are the on duty consultant in a rural emergency department.

A 66 year old man is brought in by ambulance after a syncopal episode whilst eating dinner at a local restaurant. On initial examination, he is now awake and alert but complaining of central chest discomfort. His observations are otherwise within normal limits.

An ECG is provided:



1) State four abnormalities on this ECG (4 marks)

- ST elevation V2-V5
- Second degree AV block (Mobitz II)
- Pathological Q waves V1-V4
- RBBB
- Left atrial enlargement

2) What is the most likely primary pathology of the ECG and secondary complication (2 marks)

- Primary Pathology: Acute antero-septal infarct
- Complication: Mobitz II second degree heart block

The emergency buzzer goes off whilst he is having a chest x-ray. He is brought back to a resuscitation cubicle and is now unresponsive.

His vital signs are now as follows:

BP 65/40

HR 18 bpm

SAO₂ - 90% with a poor trace

RR 10

Some of his initial bloods are given below:

Sodium 142 (135-145)

Potassium 5.1 mmol/L (3.5-5.2)

Urea 8.2 mmol/L (2.7-7.8)

Creatinine 98 mmol/L (45-90)

Glucose 6.8 mmol/L ((3.0-6.0)

High Sensitivity Troponin 18 ng/l (< 14)

3) What is the likely cause of the sudden deterioration? (1 mark)

- Complete heart block

4) Outline your immediate management priorities for this patient (5 marks)

- Support airway and optimise ventilation / oxygenation
- Drugs - atropine, adrenaline, isoprenaline (ideally dose would be given)
- Re-perfusion - thrombolysis (rural centre so cath lab unlikely)
- Pacing - transcutaneous or trans-venous
- Referral to regional cardiology service for permanent pacemaker insertion and coronary re-perfusion