

ED QUICK QUIZ

WHAT IS THE DIAGNOSIS?

BACKGROUND

A 54 year old man presents to A&E with a 30 minute history of central chest pain, sweating and shortness of breath. He says it feels like indigestion and requests some Gaviscon.

He doesn't often go to the doctor and has no past medical history and is on no medication

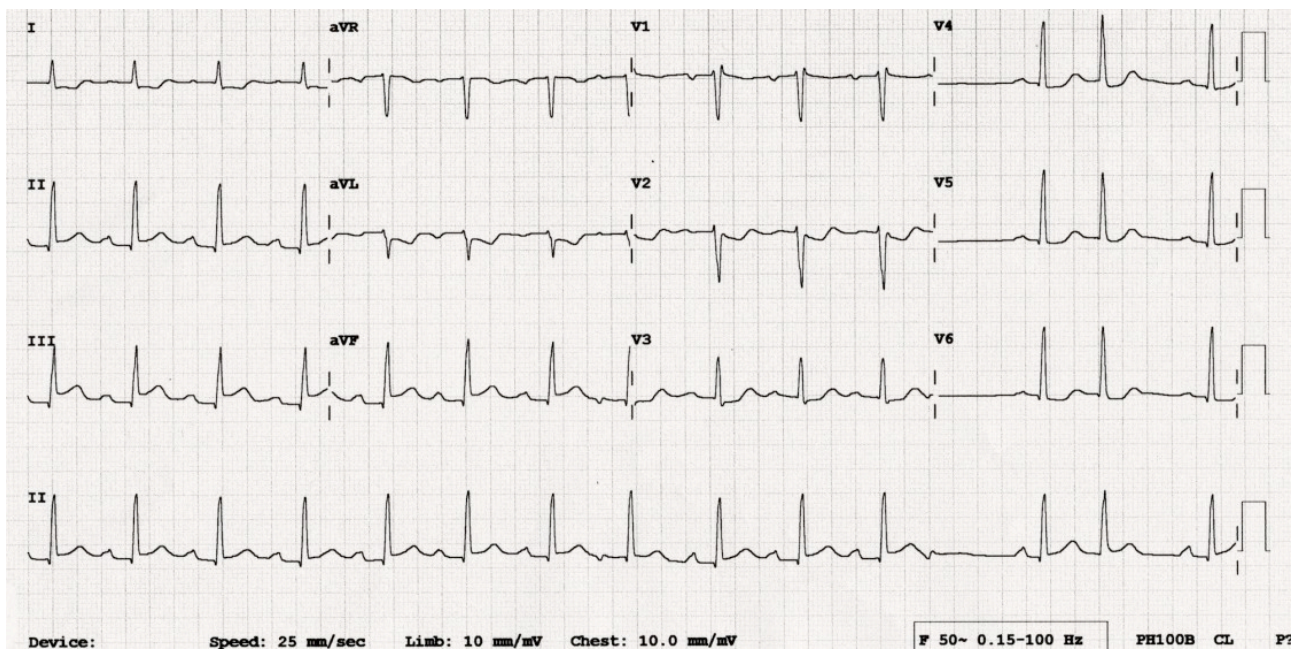
SH: smokes 20 cigs/day, occasional alcohol

OE: looks pale, clammy, unwell

HR: 82 BP: 162/76 RR 22 SpO2 95% air Temp 37.2 BM 10.2

HS I + II + 0, pulse regular, CRT 2 seconds, calves SNT

Chest clear, abdomen SNT, BS +ve



You give the patient 2 sprays of GTN and 300mg aspirin. A few minutes later the patient looks much worse. You recheck his blood pressure and find it is 82/40mmHg

QUESTIONS

1. What is your diagnosis?
2. Why has the patient deteriorated?

3. How will you continue management?

ANSWERS & DISCUSSION

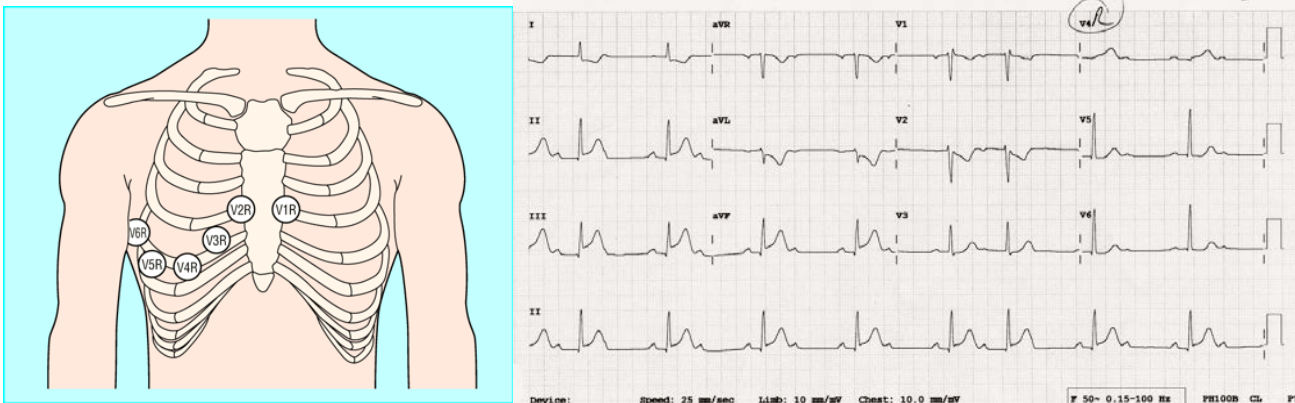
1. This man has an inferior STEMI with right ventricular infarction. Right ventricular infarction complicates up to 40% of inferior STEMIs and isolated right ventricular MI can occur rarely.

Suspect right ventricular infarct when:

- There is ST elevation in V1 and
- ST elevation in lead III is greater than in lead II (lead III is more rightward facing and more sensitive to injury to the right ventricle)

ST elevation in V1 > V2 or ST elevation in V1 with ST depression in V2 also support the diagnosis.

If suspected, it can be confirmed by performing an ECG with right-sided leads:



In the above ECG only lead V4 has been placed on the right (see V4R) as this lead has a sensitivity for RV infarct of 83%. If there has been RV infarct then right-sided leads will show ST elevation as can be seen in V4R.

2. Patients with right ventricular infarction are very sensitive to preload due to poor right ventricular contractility. Nitrates, which reduce preload can cause profound hypotension and for this reason are contraindicated.

3. Manage this patient's STEMI by:

The patient should already be in resus – ensure that he is and inform a senior doctor
ABCDE – in this case hypotension is managed by fluid loading to increase preload.

Call the Golden Jubilee, fax the ECG and arrange emergency transport for PCI

Given aspirin, ticagrelor, heparin IV 5000 units, morphine and metoclopramide

Beta blockers are indicated in ACS but should not be given to this patient who is hypotensive.