Conclusions
Follow Up
Management
Initial Work Up
Patient Presentation
Declarations

An interesting case of type 2 myocardial infarction

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Declaration of Interest:

I have nothing to declare

Conclusions

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Initial Observations

Respiration rate: 18 bpm

Oxygen saturations: 100% on air

B.P. : 80/60mmHg

Heart rate: 150 bpm

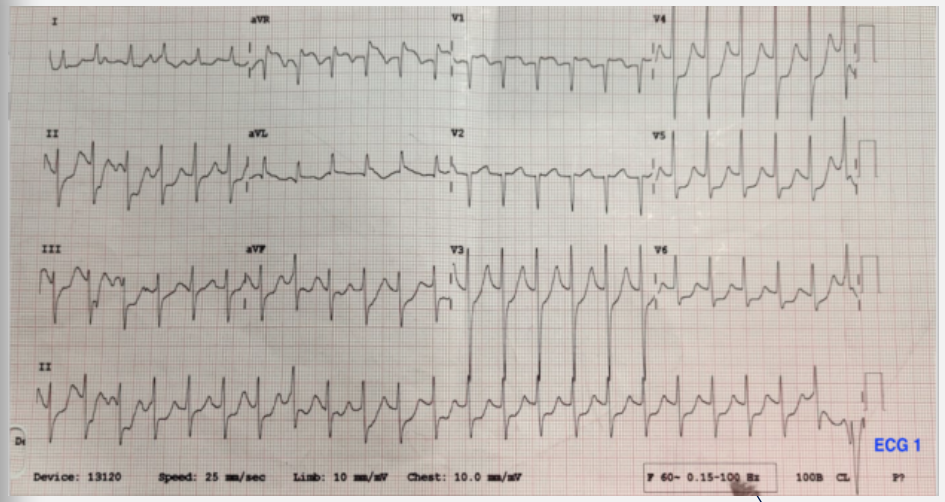
Temperature: 33.4 ^{o}C

GCS 13/15

Normal blood sugar

Patient Presentation

- 55-year-old female presented to the Emergency Department with light-headedness
- Woke during the night with palpitations and was found collapsed on cold bathroom floor by partner.
- Complaining of palpitations earlier that day
- History of chest palpitations since aged 10 and Reynaud's syndrome
- Regular medication was SSRI



Admission blood results

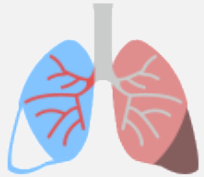
Abnormal results included raised creatinine (123 umol/L).

High-sensitivity cardiac troponin concentration was raised 478 ng/L and her peak troponin at 12 hours was 22,845 ng/L (normal range 1-16ng/L)

Echocardiogram

Normal left ventricular size and function. No significant valvular wall abnormalities or regional wall motion abnormalities

CT Pulmonary Angiogram



No evidence of pulmonary embolus

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Admission

Warmed & IV fluids

Cardioverted to sinus rhythm without intervention

Diagnosis of type 1 Myocardial Infarction

Day 2: intermittent episode of non-sustained ventricular tachycardia

Invasive coronary angiogram showed normal arteries. Type 2 Myocardial Infarction diagnosis

Discharged home

Criteria for type 2 MI

Detection of a rise and/or fall of cTn values with at least one value above the 99th percentile URL, and evidence of an imbalance between myocardial oxygen supply and demand unrelated to acute coronary athero-thrombosis, requiring at least one of the following:

- Symptoms of acute myocardial ischaemia;
- New ischaemic ECG changes;
- Development of pathological Q waves;
- Imaging evidence of new loss of viable myocardium or new regional wall motion abnormality in a pattern consistent with an ischaemic aetiology.

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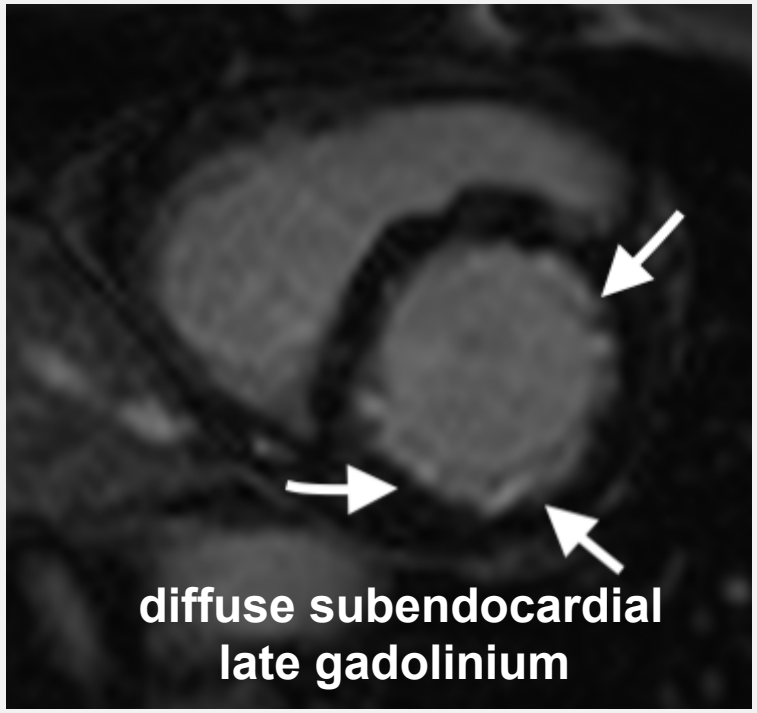
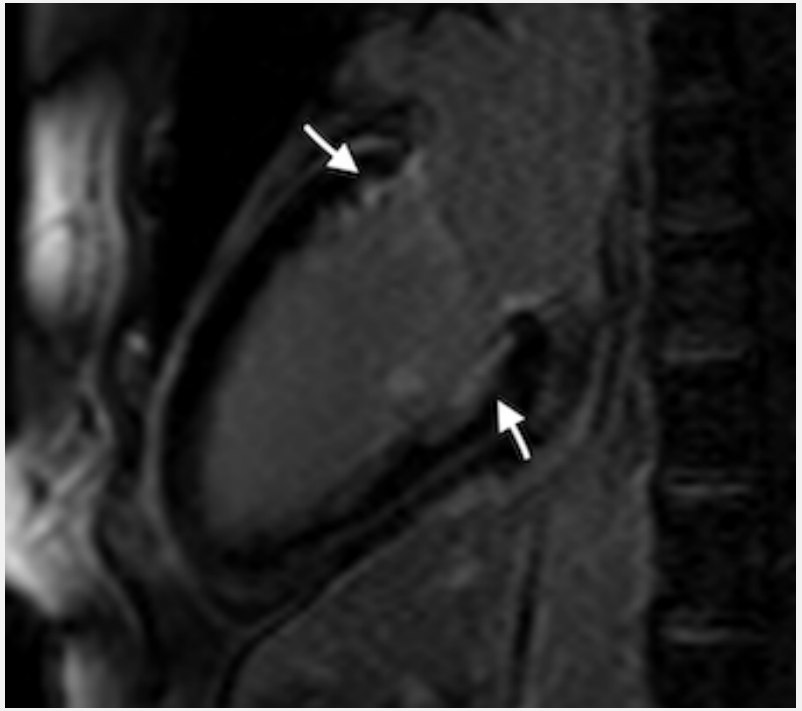
DEMAND-MI Research Study investigating type 2 myocardial infarction

Cardiac Magnetic Resonance Imaging (MRI) scan





It is likely that this was caused by global ischaemia as a result of her haemodynamic compromise and her arrhythmia

Treatment of type 2 myocardial infarction = identifying & managing supply and demand imbalance

Advised not to drive for 1 week and was followed up by local cardiology team

High-sensitivity cardiac troponin assays have improved the diagnosis of myocardial infarction & identify patients with

No compelling data for optimal treatment due to heterogeneity in responsible mechanisms.

Manage underlying

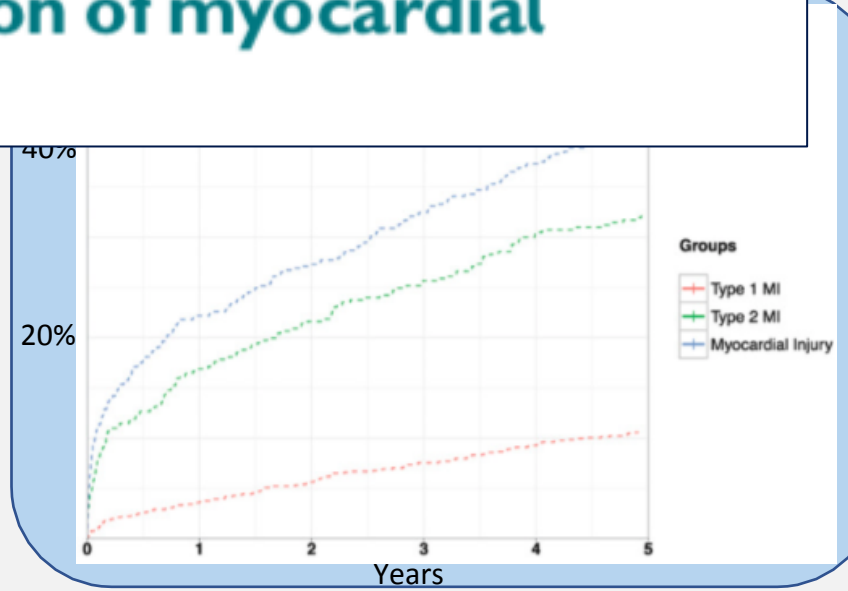
ESC European Society of Cardiology

European Heart Journal (2019) **40**, 237–269
doi:10.1093/eurheartj/ehy462

EXPERT CONSENSUS DOCUMENT

Fourth universal definition of myocardial infarction (2018)

Making timely and accurate definitions in the clinical settings can be challenging due to overlap of diagnostic criteria.
A coronary angiogram is not always clinically indicated or required.



Chapman et al 2017 Long-Term Outcomes in Patients with Type 2 Myocardial Infarction and Myocardial Injury. Circulation 137 pp.1236- 1245

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