Introduction

We present a case of pulmonary embolism in a young man who benefitted from point of care ultrasound. His management was changed significantly with the results despite initial risk stratification suggesting ambulatory management.

Case report

• A previously healthy 36-year old man presented to hospital with exertional breathlessness for a week and mild left leg swelling.
• At triage, he was noted to have a raised BMI and a resting tachycardia (126 beats per minute); oxygen saturations were 96% on air, with a respiratory rate 20 breaths per minute.

Investigations

Bloods
- Raised White cell count & CRP
- Normal Troponin

CTPA
- Bilateral proximal pulmonary emboli (PE)
- No comment on right heart was made

ECG

Chest radiograph
- Unremarkable

Dilemma

Intermediate Risk PE with Low PESI Score (66)
- Meets ambulatory criteria but tachycardic a week from index event!

Likely cardiovascular instability hence
- Point of care ultrasound (Echocardiogram + FAMUS DVT) scan performed

Diagnosis

Intermediate risk PE with high risk features
- Mobile right atrial thrombus + right heart dysfunction
- Proximal deep vein thrombosis (DVT)

Immediate management:
- Intravenous heparin + monitoring in coronary care unit
- Rescan and re-evaluate in the morning

Further management

Risk assessment was revised in view of higher risk features
- Haemodynamic status + Right heart dysfunction
- Residual clot load (mobile, worm-like cardiac thrombus + proximal residual deep vein thrombosis)

**THROMBOLYSED WITH ECHO EVIDENCE OF CLOT (heart and leg) RESOLUTION (immediately post thrombolysis)**

Discussion

Intermediate risk PE can pose a management challenge. It requires personalised decision making with experienced clinicians. Important factors to identify include degree hypoxaemia, haemodynamic status, serum lactate, troponin, evidence of right heart dysfunction, residual DVT and particularly right atrial thrombus.

This patient with PE was at apparently relatively low risk using the PESI score. With pressure on hospital beds it would have been tempting to discharge him to ambulatory management. With point-of-care ultrasound, his risk stratification and management were altered significantly.

This case highlights the value of point-of-care ultrasound performed by acute physicians out of hours in various scenarios including the 'simple' low risk PE.

References