Case three – Chest pain

Ms Y, a 37 year old woman.

Past medical history: malignant hypertension associated with chronic kidney disease, hypertensive retinopathy and left ventricular hypertrophy.

Presenting complaint: collapse with sudden onset of chest pain while attending a job interview. Self-presents to the ED as a result.

Admission care

15.27 h: HCA takes observations, patient oriented to time and place, but repeating herself, and unsure of events preceding, modified early warning score (MEWS) 1 and temperature 35.4°C.

16.28 h: bloods return, K+ 2.34, normal FBC, CRP and liver function, creatinine off baseline at 149 and troponin 0.11 (normal range <0.07).

17.24 h: Registrar 1 review, noted that interview had gone well and was standing talking to a member of staff when she got a sudden central stabbing chest pain, sat down to drink some water and then does not remember anything until ED attendance.

Has previously had a miscarriage, been known to be a poor attender to malignant hypertension clinic for assessment of her retinopathy, renal disease and left ventricular hypertrophy. Is awaiting a magnetic resonance imaging for assessment of hyperaldosteronism. MEWS 0.

Issues: collapse of unknown cause, elevated troponin, abnormal renal function, hypokalaemia.

Impression: possible vasovagal/acute coronary syndrome/hyperaldosteronism.

Discussed with consultant on call: computed tomographic pulmonary angiography (CTPA) to rule out PE and dissection. CTPA arranged for 18.30 h. ?PE, admitted with collapse and chest pain, with a background of malignant hypertension.

17.56 h: registrar 2 review. Handed over to review by day registrar.

Reviewed patient differential diagnoses: pulmonary emboli, aortic dissection or acute coronary syndrome, however when talking to the patient she did not want to remain in hospital.

Patient expressed a strong belief in God and knew that he would cure her and keep her well. Registrar 2 explained to the patient that they also believed in God and that he believed that God would work through the health care providers to make her well. Patient remained in hospital for the CTPA.

19.55: consultant review. CT performed and admitted to ward bed. Husband present on ward review. Patient explains to team that “God has seen her” and she is no longer unwell. Consultant discusses that the blood test has shown heart damage.

Patient insists on going home and to be followed up as an outpatient. Prior to self-discharge verbal CTPA report from registrar states, 'On initial review of imaging only no evidence of PE or dissection. Mild pericardial effusion and left ventricular hypertrophy. Please await formal report for detailed review.'

Patient self-discharges (documented to have capacity, although no formal assessment written).

21.42: Radiology further review documented:

> *No evidence of PE or right heart strain. Ascending aorta is dilated to 41 mm with normal diameter of descending aorta. Marked ventricular hypertrophy. Dilated aorta root would benefit from discussion at vascular surgical multidisciplinary team (MTD) meeting. Acknowledged by team and referred for discussion.*

Subsequent events

Outcome one

Next day: contacted by ward registrar, arranged to come to an ambulatory care appointment and that outpatient referral to the vascular team would be made.

Ten days later: vascular MDT discussion – no concerns with regards to imaging, no further follow up. Patient asymptomatic, feeling well.

Outcome two

Next day 18.00 h: found in bed by husband, lying face down and unresponsive. Ambulance called, resuscitation performed with no success and was pronounced dead at the scene.

Post-mortem performed.

Cause of death:

> 1a: Cardiac tamponade
>
> 1b: Dissection and rupture of ascending aorta
>
> 1c: Hypertensive heart disease