I think I’d better think it out again:
An atypical cause of chest pain in a young female.

Wheeler J, Ferdinand E, Gupta J

Case report

A 20 year old female with a background of insulin dependent diabetes presented with a 6 day history of central chest pain, associated with shortness of breath and palpitations.

On admission she was tachycardic, tachypnoeic, hypotensive and pyrexial. Examination revealed a clear chest and normal heart sounds.

Initial investigations revealed raised inflammatory markers, a negative troponin but a positive D-Dimer. Electrocardiogram indicated a sinus tachycardia and chest X-ray was normal.

An urgent computed tomography pulmonary angiogram revealed no embolus, but a large pericardial effusion (fig 1).

Following transfer to the cardiothoracic centre further imaging demonstrated a contained rupture of a mycotic aneurysm at the aortic root.

The patient underwent an aortic root replacement; Staphylococcus aureus was cultured from the explanted aortic root. She subsequently was treated with a prolonged course of intravenous antibiotics and made a good recovery.

Discussion

Mycotic aortic aneurysm of the ascending aorta without previous cardiac surgery is rare, being reported in only 2.9% of cases.¹

Due to its rapid expansion and tendency to rupture it is life-threatening,² and if left untreated it is almost universally fatal.

The most common pathogens isolated from mycotic aneurysms are Salmonella and Staphylococcus species.³

Surgical intervention is always required, however even after a successful repair and insertion of a graft, prognosis is poor, with an in-hospital mortality of 11.8%.³

Pericarditis should be considered in young patients with chest pain and physicians should be mindful of atypical presentations. Although often self-limiting, this case demonstrates the serious complications that can occur. Despite the life-threatening features this patient made a full recovery.

References: