Intimal intimation

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Clinical

A 71-year-old woman with a long history of hypertension presented to the emergency department with sudden onset of chest pain radiating to the back. Initial investigations included a chest radiograph (Figure 1).

Figure 1. AP chest radiograph on admission (arrow indicates intimal calcification)

What is the diagnosis?
Answer
Displaced intimal calcification of the thoracic aorta consistent with *intramural haematoma* (Figure 2).

Figure 2. CTA showing mural thickening consistent with intramural haematoma (arrow)

Comment
A CT angiogram (CTA) demonstrated an intramural haematoma with the lead point being a penetrating atheromatous ulcer in the descending aorta (Figure 3). Definitive endovascular management was performed and the ulcer lesion was excluded with a thoracic stent.

Intramural haematoma is a life threatening condition that requires early recognition and prompt treatment. It is a variant of classic aortic dissection in which the false lumen is represented by a haematoma in the aortic wall. The progress and management is similar to classical aortic dissection.

Due to advances in imaging technology and better understanding of acute aortic pathologies the term acute aortic syndrome has been introduced. It consists of classic aortic dissection, penetrating atheromatous ulcer and intramural haematoma.¹
Chest X-rays are a routine initial investigation for patients presenting with chest pain. Abnormal findings seen in aortic dissection and pooled sensitivities include widening of mediastinum (64%), abnormal aortic contour (71%), pleural effusion (16%) and displaced intimal calcification (9%).

Although the presented sign is uncommon, clinicians need to be aware of aortic dissection chest X-rays signs to prompt initiation of advanced diagnostic imaging such as CT angiogram or transoesophageal echocardiography.

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