

Giant aortic aneurysm presenting as a mass on chest X-ray

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Clinical Image Description

A 60 years old female patient presented in our institute with chief complaints of dyspnoea and occasional chest pain for last one year. General physical examination was normal. On cardiovascular examination, ejection systolic murmur was heard in right parasternal and supraclavicular area. Chest radiograph showed a well defined, round, homogenous radio-opaque lesion in left upper and mid zone with its medial border merging with mediastinum [Figure 1A], causing mass effect on trachea and left main bronchus (white arrow). Lateral border of the lesion was reaching till chest wall. Aortic knuckle and proximal descending thoracic aorta was not visualized separately. Few calcific foci were seen along the superior border of the lesion (black arrow). Patient underwent transthoracic echocardiography which showed normal left ventricular systolic function with normal ejection fraction. However, on suprasternal view, a large anechoic lesion was seen which showed to and fro colour flow on Doppler suggestive of “yin-yang” phenomenon [Figure 1B,C]. Subsequently patient underwent computed tomography (CT) angiography of thoracic aorta which showed a large unruptured fusiform aneurysm in proximal descending thoracic aorta with discontinuous calcification in its wall [Figure 2].

Aneurysms of thoracic aorta can present as a mediastinal mass on chest x-ray. Rarely large aneurysms can occupy whole of the hemithorax and become difficult to differentiate from a lung mass (as in index case). However, presence of peripheral calcification and non-visualization of normal aortic shadow may provide a clue to diagnosis. If reaching till anterior chest wall, aneurysm can be visualized on ultrasound. On gray scale ultrasound the aneurysmal sac appears anechoic resembling a cystic lesion. However, colour Doppler demonstrates classical “yin-yang” phenomenon referring to and fro motion of blood within the aneurysmal sac. CT angiography remains the modality of choice for imaging evaluation of aortic aneurysm and can accurately depict the morphology of aneurysm and any signs of impending rupture. Thus aortic aneurysm should be kept in differential diagnosis of a large mediastinal mass, especially when adjacent aortic shadow is not visualized.

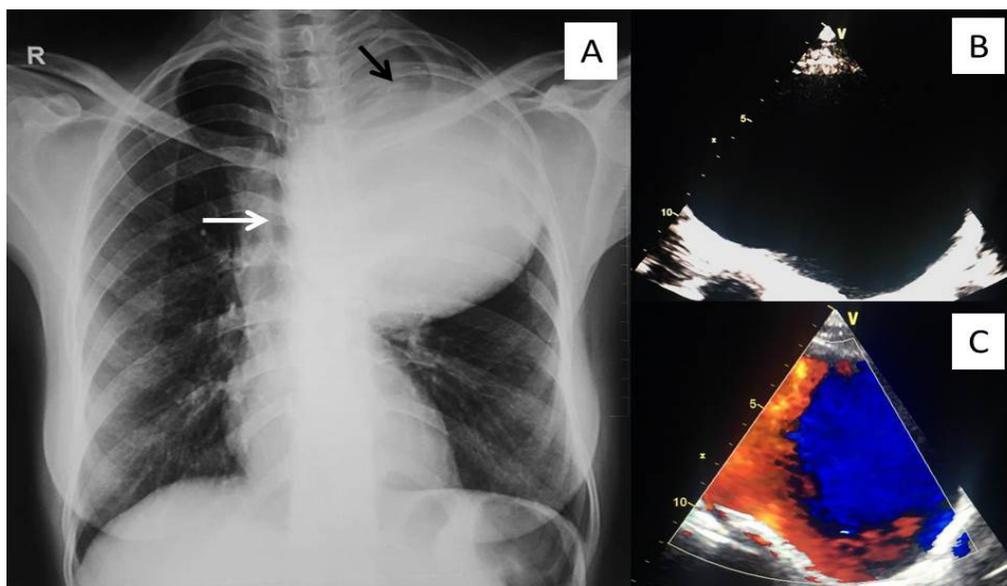


Figure 1 (A): Chest x-ray posteroanterior view showing a large well defined homogenous radio-opaque lesion in left upper and mid zone displacing trachea to right side (white arrow). Also note calcific foci seen along superior border of the lesion (black arrow). [B,C]: Suprasternal view on transthoracic echocardiography shows a large well defined anechoic lesion (B) with to and fro flow on color Doppler (C).

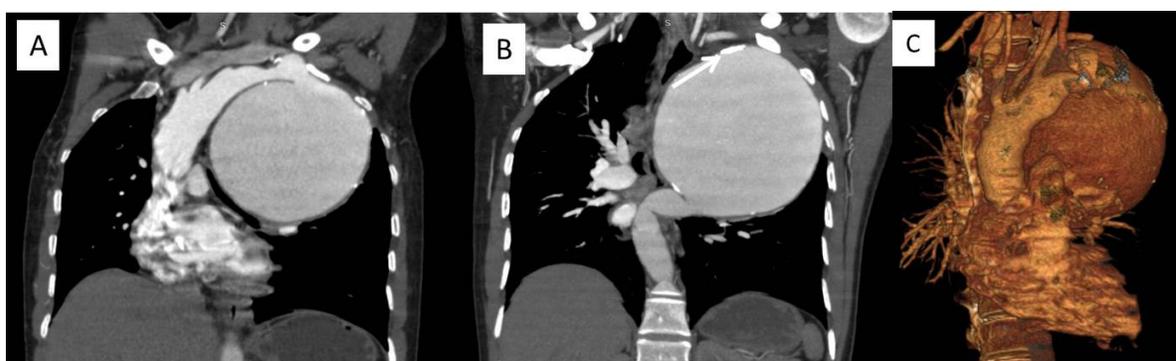


Figure 2: CT angiography coronal multiplanar reformatted (MPR) (A,B) and volume rendered (VR) images (C) showing a large fusiform aneurysm involving proximal descending thoracic aorta with peripheral discontinuous calcification (arrow in B) in its wall.

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