

Incidental detection of a curved radiopacity on the chest X-ray

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ARTICLE

A 27-year-old asymptomatic female was referred to our institution with an abnormal chest radiograph obtained as a part of prerecruitment medical screening. The chest radiograph showed curved radiopacity coursing inferomedially along the right cardiac border along with an abnormal right cardiac border (shifted to the right side of chest with increased convexity) and small right lung hilum [Figure 1]. Subsequently, computed tomography of the thorax was done to evaluate these findings. Coronal-reformatted images of the thorax showed curved vascular structure extending from right middle and lower lobes to inferior vena cava (IVC), just above the right hemidiaphragm. In addition, there was narrow caliber of the right pulmonary artery along with hypoplastic right lung. Enlarged right atrium was also seen [Figure 2a-c].

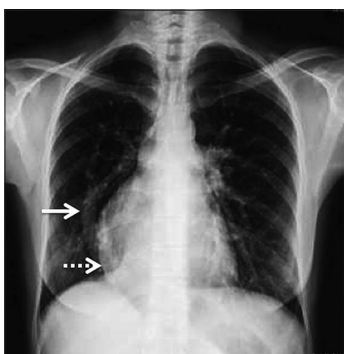


Figure 1: Chest X-ray frontal view showing a curved radiopaque shadow coursing inferomedially along the right cardiac border (arrow). In addition, there is abnormal right cardiac border, shifted to the right side with increased convexity (dashed arrow) and small right lung hilum

QUESTION

What is the diagnosis?



Figure 2: Contrast-enhanced computed tomography of the thorax, (a) coronal-reformatted image of the thorax showing abnormal vascular structure (arrow) extending from the right lung to inferior vena cava, joining it just above the right hemidiaphragm. (b) Axial computed tomography image of the upper thorax showing narrow caliber of right pulmonary artery (dashed arrow) along with hypoplastic right lung. Abnormal vascular structure described above is also seen in the cross-section (arrow). (c) Axial computed tomography image of the lower thorax showing enlarged right atrium (dashed arrow) and the abnormal vascular structure in the cross-section (arrow)

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ANSWER

Diagnosis is Scimitar syndrome.

DISCUSSION

Scimitar syndrome is described as partial or complete anomalous pulmonary venous drainage of the right lung to the IVC, usually in association with anomalies of the right lung (commonly hypoplasia), pulmonary artery and vein hypoplasia/stenosis, and bronchial abnormalities.^[1] A wide spectrum of clinical presentations is seen in these patients. Dupuis *et al.* divided the patients into two groups: Infantile group, who presents within 1 year of age, and adult group, who present later.^[2,3] Infantile patients present with respiratory insufficiency and cardiac failure while adult patients are usually asymptomatic or present with repeat episodes of infection, minor dyspnea, or hemoptysis.^[4]

Scimitar syndrome was named by Neill *et al.* in 1960.^[5] The word “Scimitar” is used to describe this syndrome as the anomalous pulmonary vein of right lung appears as a curved radiopacity along the right cardiac border on chest radiograph, resembling a curved Turkish sword called scimitar.^[6] Surgical treatment is only indicated in scimitar syndrome if left to right shunt is significant or severe symptoms and right ventricular dilatation and concomitant cardiac lesions are seen.^[7] The type of surgical management to be used is controversial and includes reimplantation of anomalous pulmonary vein into the left atrium, division of abnormal arterial supply of the lung, or partial/complete

resection of the right lung.^[8] In conclusion, with the increased usage of imaging modalities, scimitar syndrome may be detected incidentally and should be identified. However, it may not require any surgical treatment in an asymptomatic adult with a small shunt.

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Conflicts of interest

There are no conflicts of interest.

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