

Unilateral left pulmonary vein atresia: radiologic findings in an adult case

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An 18-year-old young man who had been physically healthy presented with cough and fever after cold. A nonenhanced chest CT scan showed a small left hemithorax with thickened interlobular lines as well as a mild ipsilateral mediastinal shift (*Figure 1*). Contrast-enhanced CT angiography revealed a small left pulmonary artery (LPA) with poor contrast enhancement compared with the right pulmonary artery. No pulmonary veins were identified on the left side, but abundant collateral vessels reflecting the mal-distribution of blood flow were noted. Posterior view of volume-rendered image of the LPA found the left border of the left atrium was smooth, without evidence of rudimentary pulmonary veins (*Figure 2*). Echocardiography showed no intracardiac anatomic abnormality but the left pulmonary veins remained not observed. Based on these findings, a diagnosis of unilateral left pulmonary vein atresia was suggested. The patient was treated with antibiotics and aggressive chest physiotherapy. Since the symptoms improved, the patient was discharged in accordance to his own wishes. The young man was doing well after 3 months of clinical observation.

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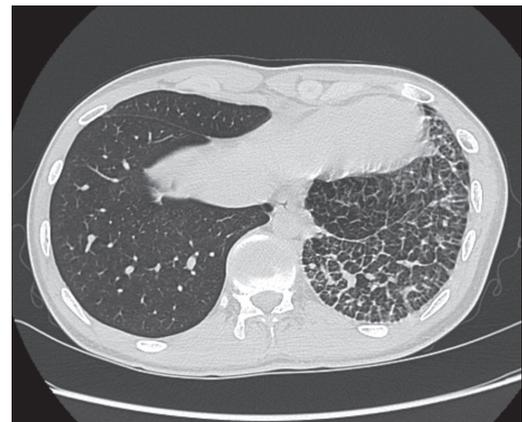


Figure 1 Axial nonenhanced chest CT image showed a small hemithorax with ipsilateral septal thickening and increased tissue attenuation of the left lung



Figure 2 Volume-rendered image of the left pulmonary artery revealed the significantly smaller size of left pulmonary artery (arrow), the absence of a pulmonary vein connection to the left atrium but abundant mediastinal venous collateral vessels (arrowheads)