

A rare cause of recurrent localized pneumonia; intralobar pulmonary sequestration

Mehmet Semih Demirtas¹, Emrullah Arikanoğlu¹, Ahmet Sigirci², Erdem Topal³

¹Inonu University Faculty of Medicine, Department of Pediatrics, Malatya, Turkey

²Inonu University Faculty of Medicine, Department of Radiology, Malatya, Turkey

³Inonu University Faculty of Medicine, Department of Pediatric Immunology and Allergy, Malatya, Turkey

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Dear Editor,

Pulmonary sequestrations are characterized by the absence of a lobe or segment in relation to the normal tracheobronchial system. Arterial circulation is usually achieved by a systemic artery that extends from the abdominal aorta and passes through the diaphragm to the sequestered tissue and has no connection with the bronchial tree or pulmonary arteries (1). The caudal primitive foregut is derived from the caudal diverticulum. For this reason it is associated with other foregut-derived pathologies. The venous return usually results in pulmonary venous, rarely systemic venous. It sums up to 0.15% to 7% of the congenital anomalies of the pulmonary system. It is 3 times more common in males (2). Pulmonary sequestrations include two subgroups as intralobar and extralobar. Intralobar pulmonary sequestration usually seen in the lower lobes of the lungs and make up 75% to 85% of all PSs (3).

This malformation is not a life-threatening condition, but it may present in different clinical ways, such as cardiovascular disease, long-term infection. The most common treatment is surgical removal of the PS.

A 7-year-old girl was followed at the external center due to frequent infection, recurrent pneumonia, wheezing, and growth retardation. She also had pneumonia in her neonatal period. We were counseled to our clinic for further examination. Vital findings of the patient; fever was 36.3 °C, blood pressure was 100/60 mmHg, heart rate was 106 / min and respiration rate was 28 / min. Physical examination revealed a weight of 17.5 kg (3-10 P) and a height of 112 cm (3-10 P). Chest X-ray was performed. Right lung was clear; however left lung indicated reticulonodular haziness at the left middle and lower zone posterior segment. In the laboratory examination of the patient; white blood cell 5690 / mm³, hemoglobin

11.2 g / dl, platelet 422 / mm³, Electrocardiogram (ECG) was performed and the results were normal, biochemical parameters and electrolytes were within normal limits. Due to recurrent pneumonia; sweat test negative, ppd negative, esophagography for GERD was normal, blood immunoglobulin levels; Ig G; 1437 mg / dL (764-2134), IgA; 191 mg / dL (70-303), IgM; 264 mg / dL (69-387) and total Ig E was in 91.5 IU / mL. On CT angiography of the lungs, heterogeneous soft tissue densities of 7x3.5 cm were observed in the posterior basal segment of the left lower lobe, consistent with the sequestration of the arterial feedings from the aortic venous drainage jointly with the celiac trunk (Figure 1).

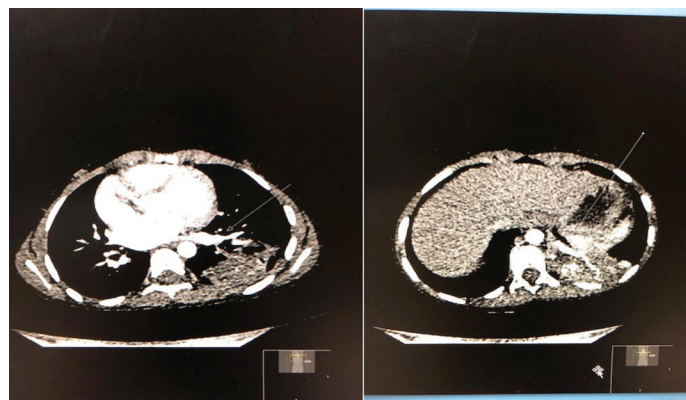


Figure 1. CT image compatible with intralobar pulmonary sequestration of the patient's CT angiography

The patient was diagnosed with intralobar pulmonary sequestration. The operation was scheduled for the patient who was consulted to the thoracic surgery department.

Sequestration is a rare congenital anomaly of lung and amounting 0.1-7% of all pulmonary system malformations (4). The etiology of PS has not yet been clarified but some theories of the pathogenesis of PS have been suggested in the literature (5). Recurrent pneumonia, including

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Corresponding Author: Mehmet Semih Demirtas, Inonu University Faculty of Medicine, Department of Pediatrics, Malatya, Turkey
E-mail: md.semihdemirtas@gmail.com

the signs of fever and productive cough, are the most common symptoms of PS but nonspecific symptoms like chest pain, pleuritic pain shortness of breath and wheezing could be found at presentation (6). PS's are not completely isolated from the normal lungs and they have connections to lungs and for this reason bacteria can easily invade (7). Because of the lack of bronchial drainage, this bacterial colonization of the PS results with pulmonary infection. Even though PS is benign in nature, sometimes PS's clinical course may be severe and life threatening situation because of complications of congestive heart failure, hemoptysis, pneumonia, and hemothorax (8). Pulmonary sequestration can be present with localized recurrent pneumonia. For this reason, PS should be considered in patients with recurrent localized pneumonia.

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