

A RARE VARIANT IN CHILDREN: AZYGOS LOBE

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Dear Editor

The human body has three lobes in the right lung and two in the left lung, separated by fissures (Kılıç et al, 2006). As a result of developmental anomalies in the lung, some variations may occur and additional fissures and lobes may be seen (Çınar et al, 2012). Azygos lobe is a rare congenital anomaly with a prevalence of 0.2 -1.2% in the population (Aziz et al, 2004). It is usually asymptomatic and does not require any treatment (Aypak et al, 2012). With this letter, we aimed to contribute to clinicians to recognize azygos lobe and make a differential diagnosis.

A 10-year-old girl was admitted to the emergency department with the complaint of pinprick pain in the chest for two days. It was learned that she started to complain of cough, sneezing, and runny nose about 2 days ago. The patient had no previous similar complaints and no known systemic disease. On physical examination, the patient's general condition was good, consciousness was clear, and vital signs were stable. On lung examination, both hemithorax participated equally in respiration, respiratory sounds were normal and there was no rales or rhonchi. Other system examinations were normal. The patient had no difficulty in breathing and chest tightness. In laboratory tests; hemoglobin: 12.3 g/dl, leukocyte: 7.100/mm³, platelet: 287.000/mm³, creatine kinase myocardial band (CK-MB): 1,34 ng/L, Troponin T <3,00 ng/L. Liver and kidney function tests were normal. C-reactive protein: 3.8 mg/L, procalcitonin: 0.03 mcg/L. The patient had normal sinus rhythm in the electrocardiogram. The chest radiograph showed a vertical line, tear-shaped opacity increase, and a triangular area in the right upper lobe (Figure 1). Thoracic computed tomography (CT) performed with contrast for differential diagnosis revealed an azygos fissure in the medial part of the right lung upper lobe and an azygos lobe separated from the other parts of the right lung upper lobe (Figure 2). No additional pathology was found. His chest pain completely resolved during follow-up and was not thought to be due to a pulmonary or cardiac pathology. The pain was thought to be musculoskeletal related and ibuprofen was prescribed. The patient was discharged with the recommendation of pediatric cardiology outpatient clinic control and was called for follow-up 2 days later. The patient did not have any complaints or

pathological examination when she came for follow-up 2 days later.

Azygos lobe is an extremely rare anatomical variation in the upper mediastinum (Ndiaye et al, 2012). Inadequate migration of the azygos vein to the tracheobronchial corner in the embryonic period results in the appearance of a separate lobe (Mata et al, 1991). Although the diagnosis is usually made with chest radiography, it can also be detected with CT scan for differential diagnosis (Kauffman et al, 2010). On chest radiography, there is a convex line due to the azygos fissure, a tear appearance due to the azygos vein, and a triangular appearance (trigone) due to extrapleural tissue above the fissure (Karre et al, 2011). Our patient presented with chest pain and chest radiography for etiology revealed an appearance compatible with azygos lobe. Thorax CT for differential diagnosis revealed a typical appearance of the azygos lobe and no additional pathology was observed.

The azygos lobe is classified in three ways according to the relationship of the azygos fissure and the lung apex. Type A if the trigone is located lateral to the apex of the lung, Type B if it is located towards the middle of the apex and the fissure is vertical, Type C, if it is located medial to the apex and the fissure, extends to the mediastinum (Aypak et al, 2012). Our case was classified as Type B according to the location of the azygos lobe.

Azygos lobe is usually found in the right lung. It is more common in males and a genetic predisposition is also thought to be involved in the etiology (Aziz et al, 2004). In our patient, it was observed that the azygos lobe was localized in the right lung in accordance with the literature. Although azygos lobe is more common in males, we found azygos lobe in a girl and we did not find any familial history when we inquired for genetic predisposition. Although the detection of Azygos lobe alone is not clinically significant and is seen to have an asymptomatic course, it should be kept in mind that additional pathologies such as pneumothorax, vascular anomalies, bullous changes, tumors, extrapulmonary sequestration may accompany the picture (Gürkök et al, 2007).

Figure 1. Postero-anterior chest radiograph. Red arrow at the top: Azygos fissure, White arrow below: Azygos vein

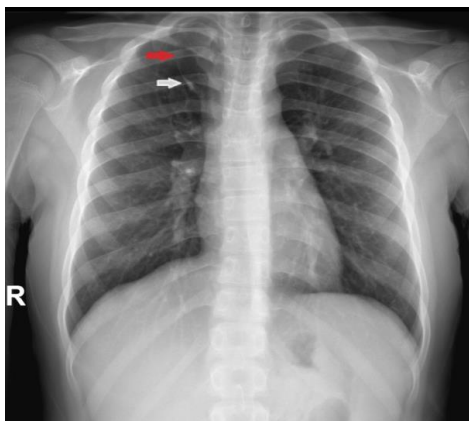
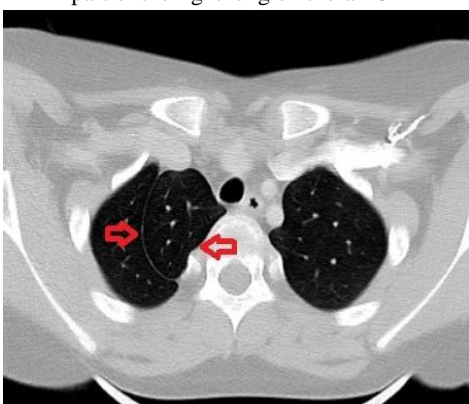


Figure 2. Azygos fissure and azygos lobe in the apicomedial part of the right lung on thorax CT



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