**Case 8670**

**Azygos Lobe**

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**Section:** Chest imaging

**Case Type:** Anatomy and Functional Imaging

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**Patient:** 60 years, female

**Clinical History:**

A 60-year-old female patient underwent a CT examination for pre-surgical staging.

**Imaging Findings:**

An adult female patient affected by sigmoid colon cancer underwent a CT examination for pre-surgical staging. Incidentally, we noticed the presence of an Azygos Lobe.

A preoperative standard chest radiography was performed and we confirmed the presence of an Azygos Lobe.

**Discussion:**

The Azygos Lobe (AL) is a normal variant that is found in 1% of anatomical specimens and on about 0.4% of chest radiographs.

AL is symptomless and usually discovered incidentally on chest radiographs.

It occurs during fetal development when the right posterior cardinal vein, one of the precursors of the azygos vein, fails to migrate over the apex of the lung and penetrates it instead, carrying along two layers each of the parietal and visceral pleura with it, forming a pleural mesentery.

The lung trapped medial to this fissure (azygos fissure) is called the “Azygos Lobe” and consists of parts of the apical or posterior segments of the right upper lobe.

The AL is supplied by the medial segments of the apical and anterior or posterior branches of the apical segmental bronchial artery and vein.

On the chest radiograph, the AL is seen at the right lung apex with the azygos vein lying on its lowermost part forming a “tear-shaped” radio-opaque shadow. A fine convex line crosses the apex of the right lung to merge with a triangular-shaped upper part of the AL (trigonum parietale). The triangular-shaped area corresponds to a small amount of extrapleural areolar tissue between the parietal layers of the pleura.

According to its size, the AL has been classified in three types: in type A, the trigonum parietale is located in the lateral aspect of the pulmonary apex; in type B, the mesoazygos has a vertical path; and in type C, the trigonum is located medially.

Axial CT images give a more accurate representation of the anomalous course of the azygos vein, of the presence of the AL and of their relations with mediastinal organs.

CT shows the deep penetration of the lung behind the superior vena cava and the trachea, occasionally contacting the medial wall of the oesophagus and the descending aorta. The azygos vein arch typically is located more cephalad than normal, generally about 2 cm above the carina; it may extend as high as the level of the right brachiocephalic vein. The superior vena cava adopts an elliptical shape and its major axis is oriented obliquely towards the left. The superior vena cava is concomitantly displaced anteriorly with respect to the trachea, while the
oesophagus is rotated toward the left. This allows lung to intrude deep into the pretracheal and retrotracheal portions of the mediastinum. The fissure is clearly visible and its morphology depends on the size of the lobe. It is C-shaped in large lobes and straight or slightly undulated when the lobe is small.

Clinically, the knowledge of Azygos Lobe anatomy is important during thoracic surgical approaches. Partial obstruction of the thoracoscopic view during a bilateral sympathectomy was reported during attempted mobilisation of the Azygos Lobe. Others reported difficulty reflecting the pleura during primary repair of the oesophageal atresia in a pediatric patient. There are also reports of the phrenic nerve coursing within the azygos fissure. Finally, multiple authors have reported spontaneous pneumothorax associated with the Azygos Lobe in both the adult and the pediatric patient.

**Differential Diagnosis List:** Incidental finding of Azygos Lobe in a CT examination.

**Final Diagnosis:** Incidental finding of Azygos Lobe in a CT examination.

**References:**


Description: Chest radiography in PA: presence of Azygos Lobe. Origin:
Description: Chest radiography in PA: zoom. Origin:
Description: Standard window: the azygos vein arch is separated from the mediastinum and trachea.
Origin:
Description: Lung window setting at the same level demonstrates the Azygos Lobe medial to the azygos arch. Origin:
Description: Lung window: azygos fissure. The Azygos Lobe is subtended medially. Origin:
Figure 3

Description: a: normal case; b: Azygos Lobe. Origin: