

Round atelectasis (Blesovsky syndrome)

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We present the case of an 81 year old male with a history of occupational exposure to asbestos from the age of 35 until the age of 55 years. He was referred for evaluation of a right lung mass. The radiographic findings (Images 1-4) were compatible with Round Atelectasis (Blesovsky syndrome)¹.

- 1) Presence of an well defined oval mass in the posterior segment of the right lower lobe that abuts the pleura.
- 2) Thickening of the adjacent pleural surface.
- 3) The bronchovascular bundle has a curved shape, "radiating" from the right hilum to the mass, creating the "comet tail" sign.
- 4) Loss of volume of the right lower lobe. Note the characteristic posterior/inner displacement of the right major fissure.

Based on previous CTs, the stability of these findings over a period of 5 years confirmed the diagnosis without the need to subject the patient to invasive examinations.

The term rounded atelectasis refers to the presence of focal lung collapse with or without folding of the lung parenchyma. Although it can occur in a number of different abnormalities, it is typically associated with pleural disease in the context of asbestos exposure (in up to 86%)^{2,3}.

The pathogenesis of round atelectasis is not fully clarified, but is thought to be due to an inflammatory reaction and fibrosis of the visceral pleura. As the fibrous tissue matures, it contracts, causing the pleura to fold into the lung, which in turn causes atelectasis¹.

It is important to distinguish these masses from lung cancer, which has

TABLE. Learning points regarding round atelectasis

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- It can be seen on various occasions, but the most common is in the context of asbestos exposure.
 - It has a characteristic appearance on Computed Tomography:
 - a) Presence of an oval or round mass with peripheral location that abuts the pleura.
 - b) Thickening of the adjacent pleural surface.
 - c) The bronchovascular bundle has a curved shape, "radiating" from the ipsilateral hilum to the mass ("comet tail" sign).
 - d) Loss of volume of the affected lobe.
 - Look for other radiologic signs strongly indicative of asbestos exposure such as pleural plaques (with or without calcification)
 - The main differential diagnosis is lung cancer. Biopsy may be needed especially in atypical cases.
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an increased incidence in asbestos exposed individuals. Round atelectasis does show enhancement at contrast-enhanced CT. It has been suggested that a uniform pattern of enhancement favors round atelectasis. However, contrast enhancement is not a reliable characteristic for differentiating benign asbestos-related disease from malignancy. Stability (as in our case) or shrinkage of the mass over time strongly suggests benignancy. However, biopsy may be required, according to clinical presentation (e.g. hemoptysis, anorexia, weight loss) and atypical radiographic presentation (including evolution over time). Round atelectasis has well defined smooth margins. The presence of a lobulated contour with spiculation or corona radiata is not compatible with round atelectasis

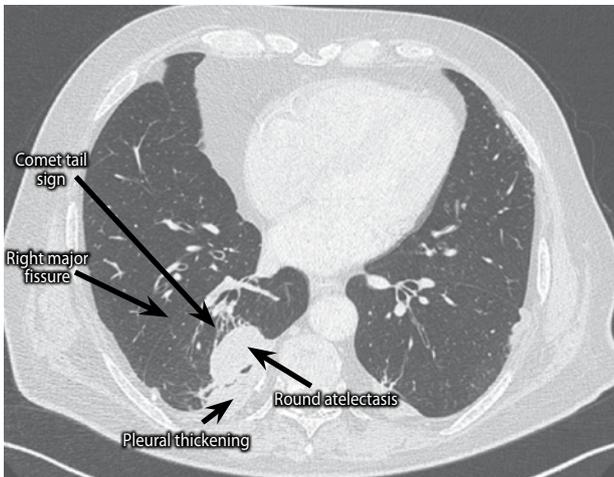


IMAGE 1. Blesovsky syndrome with the 4 characteristic radiographic findings: i) oval mass that abuts the pleura, ii) adjacent pleural thickening, iii) comet tail sign, iv) volume loss of the involved lobe.

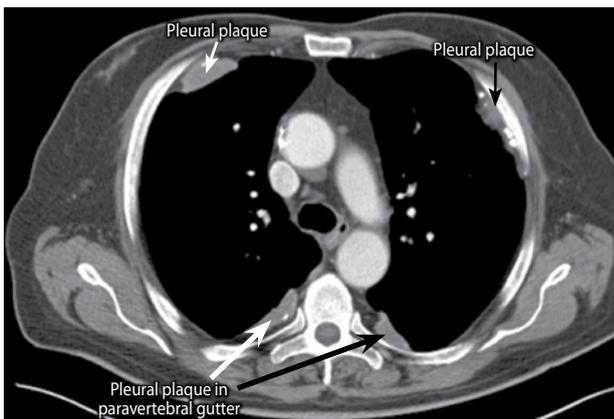


IMAGE 2. Presence of pleural plaques (arrows) with some calcification. The bilateral involvement of the paravertebral gutter (arrows) is characteristic of asbestos exposure.

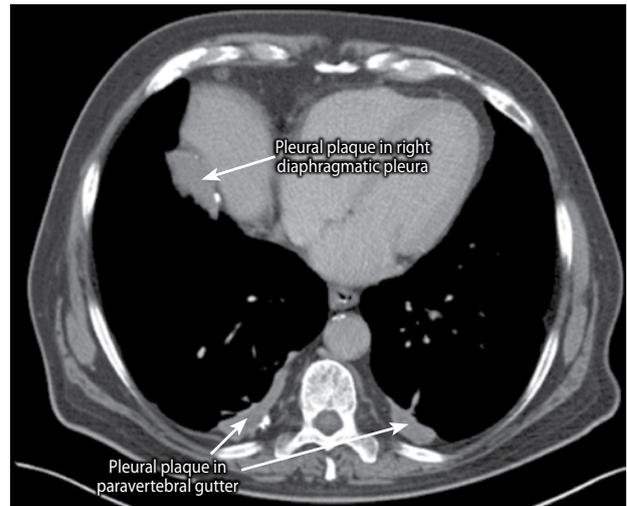


IMAGE 3. Presence of pleural plaque with some calcification in the area of the dome of the right hemidiaphragm (arrow). Bilateral involvement of the paravertebral gutter (arrows).

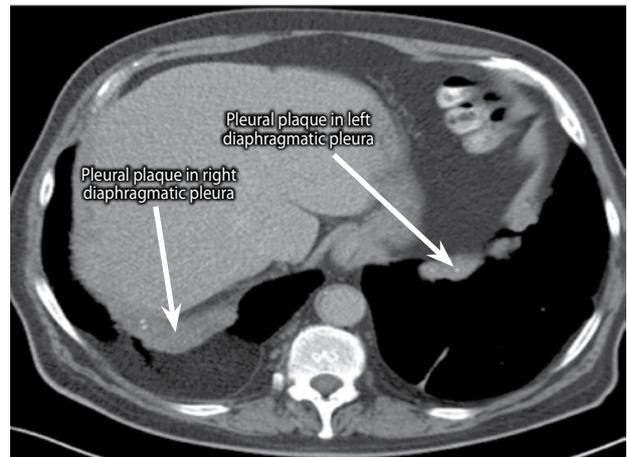


IMAGE 4. Presence of pleural plaques with punctuate calcifications in the right and left diaphragmatic pleura, characteristic of asbestos exposure (arrows).

and strongly points to underlying malignancy.

We have no conflict of interest to declare.

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