



Interlobular septal thickening

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A 52-year-old female patient presented with progressive dyspnea. One year prior, she had undergone gastrectomy for gastric cancer. An HRCT scan of the chest revealed nodular interlobular septal thickening (ILST) at the right lung base (Figure 1).

Although ILST is often seen in association with other CT findings, such as consolidation and ground-glass opacities, it can be the predominant (or sole) finding, as was the case here.

ILST can be smooth, irregular (spiculated), or nodular. Smooth ILST is the most common and least specific of the three and can be found in a large number of venous, lymphatic, and infiltrative diseases, especially pulmonary edema. Irregular ILST is basically indicative of interstitial fibrosis and is seen in patients with fibrotic lung disease; rather than being the predominant finding, it is generally found in association with other fibrotic patterns.

Nodular ILST (which was found in our patient) is a finding that is associated with a very specific group of

diseases. Although it can be found in cases of amyloidosis, sarcoidosis, lymphoproliferative disorders (lymphomas and lymphocytic interstitial pneumonia), and silicosis, it is an uncommon finding in such cases. It is primarily seen in patients with lymphangitic carcinomatosis (LC).

In patients with dyspnea and a history of malignancy, CT findings that are typical of LC (such as those observed in our patient) are diagnostic of the disease; that is, there is no need to perform a lung biopsy. In the case reported here, the final diagnosis was LC.

Pulmonary LC is the spread of the tumor to the pulmonary lymphatic system. Among the tumors that most commonly spread to the pulmonary lymphatic system are carcinomas of the breast, lung, stomach, colon, prostate, and pancreas, as well as metastatic adenocarcinoma of unknown primary site.

Pulmonary lymphatic vessels are found along the veins and bronchovascular sheaths, as well as in the interlobular septa and pleura. CT findings include peribronchovascular interstitial thickening, ILST, and smooth or nodular ("beaded") thickening of the subpleural interstitium, with normal lung architecture at the lobular level.

Because the peribronchial lymphatic vessels are affected, LC is, together with sarcoidosis, one of the few interstitial diseases that can often be diagnosed by transbronchial biopsy. The key histological findings are ILST and peribronchovascular interstitial thickening caused by infiltration of neoplastic cells in the lymphatic vessels. Given that LC is not always diffuse, CT is also useful in determining the best sites for transbronchial biopsy in patients with suggestive findings and no known tumor.

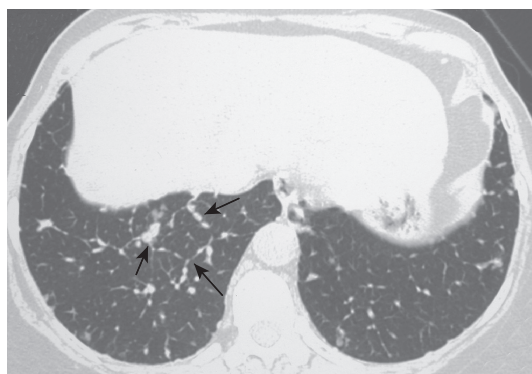


Figure 1. HRCT scan of the chest showing nodular interlobular septal thickening at the lung bases, particularly at the right lung base (arrows).

RECOMMENDED READING

1. Webb WR, Muller NL, Naidich DP, editors. High-resolution CT of the lung. 4th ed. Philadelphia: Lippincott Williams & Wilkins; 2008.

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