



Nodular fissure

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A 37-year-old male civil engineer arrived at the outpatient clinic with complaints of dry cough for three months, followed by dyspnea upon exertion. Physical examination was normal. HRCT scanning showed small disseminated nodules and nodular fissures (Figure 1).

The patient presented with small interstitial nodules on HRCT. The pattern of small nodules or pulmonary micronodules corresponds to the presence of multiple rounded opacities, with soft-tissue density and diameter <1 cm, distributed in the lung parenchyma.⁽¹⁾ They can be classified according to the distribution in the secondary pulmonary lobe (SPL) as random, centrilobular, or perilymphatic.

The random pattern is characterized by the presence of small nodules distributed randomly in relation to the SPL and uniformly dispersed by the lungs. This pattern is observed in diseases with blood-borne dissemination, such as metastases and miliary granulomatous diseases, especially tuberculosis and histoplasmosis. The centrilobular distribution is characterized by the presence of nodules in the central region of the SPL, a few millimeters from the pleural surface and the fissures; however, without touching them. Hypersensitivity pneumonitis and infectious bronchiolitis are examples of diseases that occur with this pattern. The perilymphatic pattern is characterized by the presence of small nodules that distribute preferentially along the SPL compartments that contain lymphatic structures (peribronchovascular interstitium, interlobular

septa, and subpleural regions). The diseases that most commonly present with this distribution pattern are sarcoidosis, silicosis, and carcinomatous lymphangitis.

Sarcoidosis and silicosis tend to spare interlobular septa, whereas lymphangitis frequently affects that region.⁽²⁾ Silicosis also tends to preserve the peribronchovascular interstitium, whereas lymphangitis and sarcoidosis often affect it: lymphangitis has a more smooth appearance, whereas sarcoidosis has a more nodular appearance. Subpleural nodules are more easily seen in the fissures, giving rise to what is called the nodular fissure pattern. These three diseases affect the pleural surface, but silicosis rarely presents with nodular fissures. A nodular fissure pattern corresponds, in most cases, to carcinomatous lymphangitis or sarcoidosis. Eventually, peri-fissural nodules are also seen in miliary infectious diseases (tuberculosis or histoplasmosis); however, the nodules are generally smaller and less profuse than in the case reported here.

Clinically, the patient had no history of exposure to silica. The health status of the patient was very good, there was no evidence of disease elsewhere, and dyspnea was mild, data that rule out the diagnosis of carcinomatous lymphangitis. Transbronchial biopsy showed sarcoid granulomas, with no caseous necrosis. The final diagnosis was sarcoidosis.

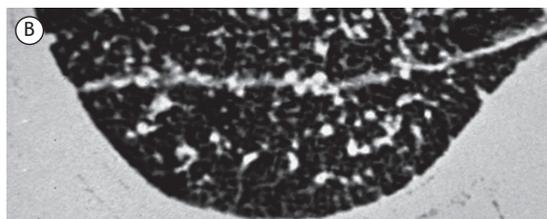
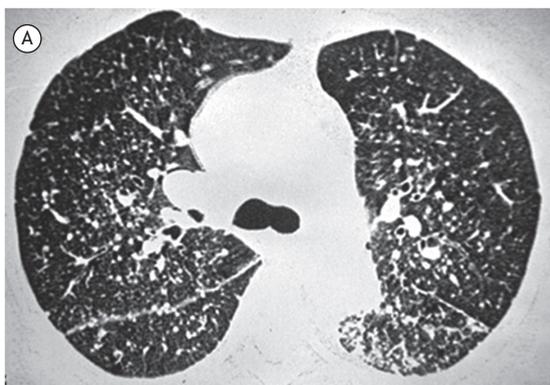


Figure 1. HRCT scans with lung window settings at the level of the bronchial bifurcation evidence small interstitial nodules distributed in the lungs. Note that there is an accumulation of nodules along the fissures (detail in B), characterizing the pattern of nodular fissure.

REFERENCES

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