



Lymph node calcifications

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A 61-year-old female presented with a 5-year history of dry cough and progressive dyspnea. A chest CT revealed small nodules and dense striae in the posterior regions of the upper lung lobes, as well as extensive lymph node calcifications, several of them predominantly in the periphery of the lymph nodes, with an “eggshell” appearance, affecting multiple mediastinal, hilar, and cervical lymph nodes. (Figure 1).

DISCUSSION

Lymph node calcifications most often result from prior granulomatous infections, especially tuberculosis and histoplasmosis. Other, less common, causes are

sarcoidosis, silicosis, amyloidosis, and calcifications secondary to the treatment of lymphomas (radiation therapy or chemotherapy). However, the patient in question had lymph node calcifications with characteristics that made them more specific. The calcifications involved lymph nodes of multiple chains, including some that presented eggshell calcifications.

When calcifications affecting multiple chains are observed, two diseases top the list of differential diagnoses: silicosis and sarcoidosis. Differentiation by imaging can be very difficult, because both diseases can present with small nodules, conglomerated masses, and areas of emphysema. It is therefore fundamental to investigate the clinical history of exposure to silica dust, given that most patients with silicosis have engaged in professional activities related to such exposure. Although our patient was a female and almost all cases of silicosis occur in male patients, she reported that she had been working at a lapidary, processing semiprecious stones, for 25 years. A diagnosis of silicosis was therefore made.

Silicosis is a chronic fibrotic lung disease caused by prolonged exposure to dust containing free silica. The diagnosis of silicosis is based on the combination of a history of exposure to silica and characteristic findings on imaging tests. Mining, quarrying, drilling (wells, tunnels, and galleries), ceramics work, marble work, sandblasting, and artisanal work with semiprecious stones are all common professional activities in Brazil.

The classic radiological findings are small nodules, typically located in the posterior and upper lung regions, which can be disseminated through the lungs. The nodules can agglomerate, forming conglomerate masses. The most common lymph node involvement occurs in the form of calcifications in multiple lymph node chains. The past and present occupation of the patient is decisive for the final diagnosis of silicosis.



Figure 1. Chest CT with a mediastinal window and coronal reconstruction, showing calcifications affecting lymph nodes of several mediastinal and hilar chains. Note that several of them present calcifications predominantly in their periphery—“eggshell” calcifications (arrows).

RECOMMENDED READING

1. Fraser RS, Müller NL, Colman NC, Pare PD, editors. *Diagnosis of Diseases of the Chest*. 4th ed. Philadelphia: WB Saunders Company; 1999.

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