Clinical picture

Lung mass with popcorn calcification

A 26-year-old female patient without smoking history received a healthy exam and accidentally found a left solitary pulmonary nodule. She was transferred to our hospital for surgery. Chest radiography showed well-defined solitary pulmonary nodules over the left hilar area with curvilinear pattern of calcification. On computed tomography (CT) of chest, the mass was smooth and included calcification and fat attenuation (Figure 1). Then, the mass was removed surgically. Histology showed that the tumor consists of lobules of mature hyaline cartilage intimately admixed with fibromyxoid stroma. The patient was diagnosed as having a pulmonary hamartoma. Then, the patient was discharged without complication, and no recurrence was noted after followed for 9 months.

Popcorn calcification refers to amorphous calcifications often with rings and arcs that resemble popped corn kernels. This type of calcification may be seen in many radiological settings, such as chondroid lesions (e.g. enchondroma, chondrosarcoma) fibrous dysplasia and pulmonary hamartoma.

Pulmonary hamartomas are rare, benign tumor-like lesions of the lung. These usually occur as a well-circumscribed single nodule in the lung parenchyma. Popcorn calcification may be seen in 10–15% of patients on X-ray and 15–30% of patients on CT.1 Pulmonary hamartomas are usually asymptomatic and are incidentally detected on the chest radiograph. Most of the pulmonary hamartomas show slow growth and require only conservative management, with surgical treatment including enucleation or wedge resection being reserved for rapidly growing masses or symptomatic patients.2

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References