

Pulmonary hamartoma mimicking primary bronchoalveolar cell carcinoma

A 52-year-old man with transitional cell carcinoma underwent a chest CT because of a newly developed pulmonary nodule observed on a chest radiograph. In addition to the nodule, a 2.8×2.4 cm well-circumscribed, pure ground-glass opacity with air cyst formation was incidentally found (figure 1). There was no evidence of calcification or fat, and primary bronchoalveolar cell carcinoma was highly suspected. When performing preoperative CT-guided needle localisation of the opacity 2 weeks later, we found that the lesion remained

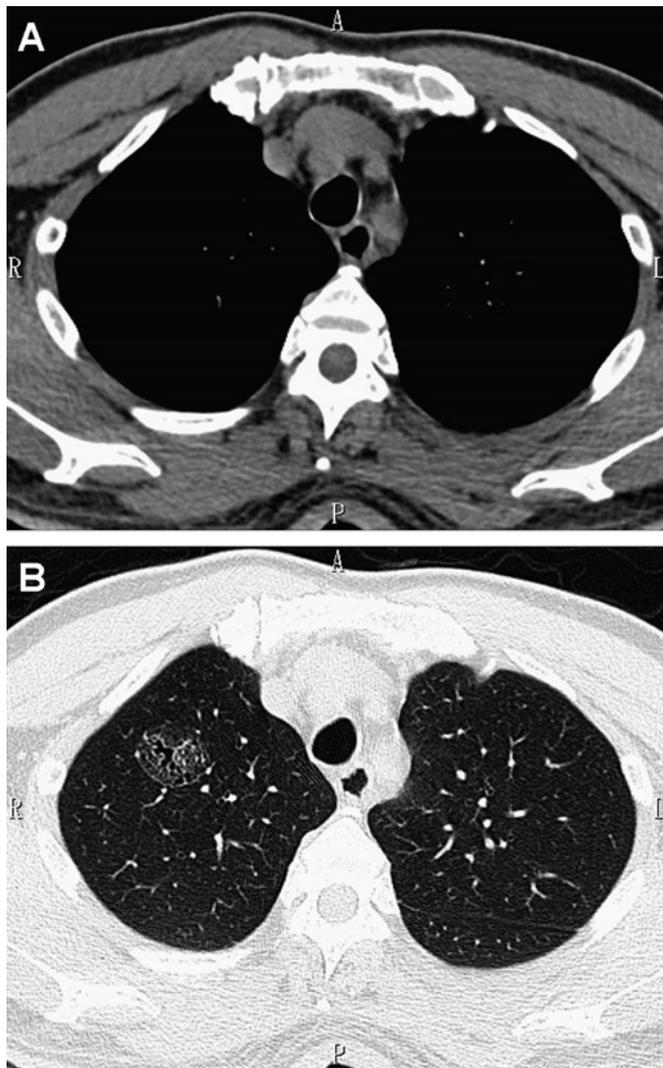


Figure 1 Chest CT image with soft tissue window settings (A) and lung window settings (B) showing a 2.8×2.4 cm well-circumscribed, pure ground-glass opacity with air cyst formation in the right upper lobe. There was no identifiable soft-tissue component, calcification or fat within the lesion.

unchanged. After video-assisted thoracoscopic wedge resection, the initial nodule on the chest radiograph proved to be a metastatic lesion, but the ground-glass opacity was pathologically diagnosed as a hamartoma (figure 2).

DISCUSSION

In a CT image, pulmonary hamartomas are typically well-defined nodules occasionally containing fat or regions of calcification or both.¹ Atypical presentations, such as a cystic mass or a soft-tissue nodule without fat or calcification, have been reported.²⁻³ Nonetheless, a pure ground-glass appearance without an identifiable soft-tissue component is extremely rare in the literature. A persistent pulmonary ground-glass opacity is

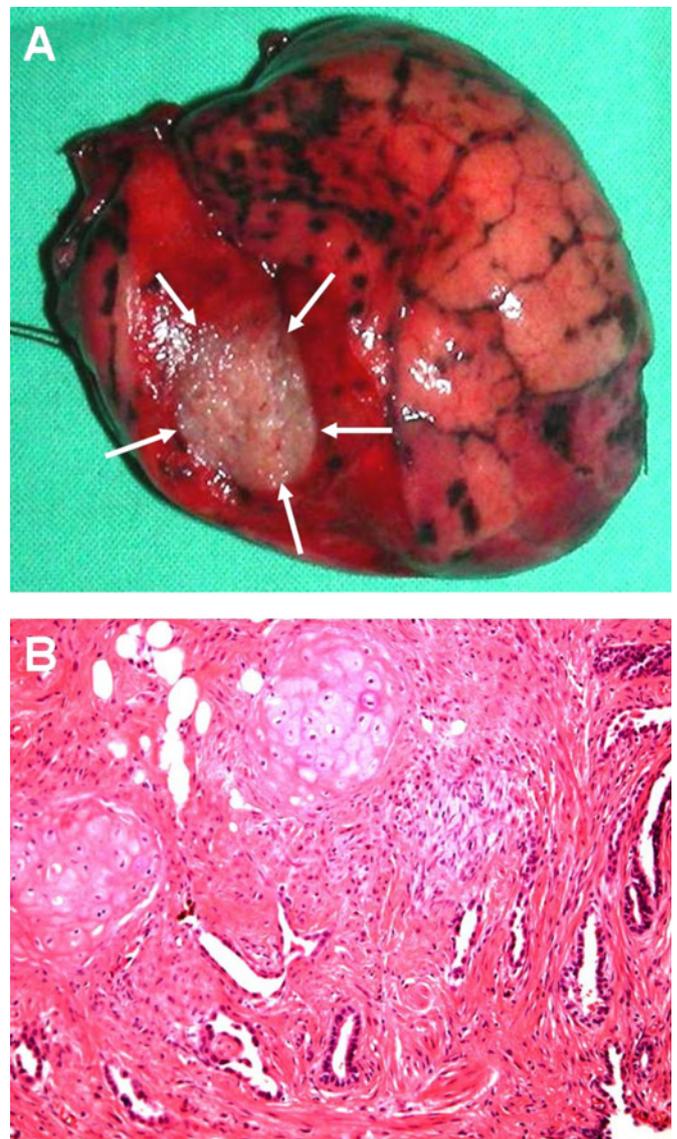


Figure 2 Gross morphology of the specimen showing a well-circumscribed, spongy and whitish tumour (arrows in A). (B) Pathologic examination demonstrating that the lesion was composed of cartilage, fat and smooth muscle with benign bronchial epithelial cells (H&E staining ×100).

Learning points

- ▶ A well-demarcated, pure ground-glass opacity with air cyst formation can be an atypical presentation of pulmonary hamartoma.
- ▶ Pulmonary pure ground-glass opacities may be due to eosinophilic lung disease, pulmonary lymphoproliferative disorder, organising pneumonia or fibrosis. When the opacities persist for at least 1 month, atypical adenomatous hyperplasia, bronchoalveolar cell carcinoma and mixed subtype adenocarcinoma are usually considered.⁴ However, hamartoma can be included in the list of differential diagnoses.

often diagnosed as an adenocarcinoma or its precursor.⁴ A limitation of our case is that the opacity was only observed for 2 weeks prior to removal. However, we believe that the appearance of this mass would have remained unchanged for more than 1 month because it was a hamartoma.

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Patient consent Obtained.

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