Sclerosing Hemangioma of the Lung Manifesting as a Cystic Lesion with an Air-Fluid Level

Yi Qian  Tao Jiang  Shiyuan Liu

Department of Radiology, Changzheng Hospital, Second Military Medical University, Shanghai, China

A 39-year-old woman suffered from intermittent pain of the left chest for half a year. Hemoptysis of about 10 ml/day began 10 days earlier, which was refractory to anti-inflammatory and hemostatic therapy. Physical examinations and laboratory investigations were unremarkable.

The radiograph demonstrated an air-containing lesion in the lower field of the left lung (fig. 1). Chest CT revealed the well-defined cystic lesion with an air-fluid level at the posterior basal segment of the left lower lobe, adhering to the focally thickened pleura. The precontrast attenuation values of the posterior liquid area ranged from 56.7 to 65.3 HU. Part of the margin and a small nodule inside the lesion were prominently enhanced (fig. 2a). Ground-glass opacities were observed around the lesion (fig. 2b).

The patient underwent an exploratory thoracotomy and the resection of the left lower lobe revealed the lesion soft in consistency and filled with dark red blood on cut section. On histopathology, a well-defined capsulated lesion with endothelial-lined vascular spaces surrounded by concentrated cuboidal epithelioid cells and polygonal tumor cells was observed (fig. 3), and a diagnosis of pulmonary sclerosing hemangioma was established [1, 2]. She had an uneventful postoperative course and a full recovery.

Cystic sclerosing hemangioma of the lung with an air-fluid level is a rare entity. The air-fluid level suggested the existence of a connection between the lesion and bronchi which caused the symptom of hemoptysis. The marginal and nodular enhancing focus in the lesion illustrated its blood supply and differentiated it from a simple air cyst.

Acknowledgements

We thank the National Natural Science Foundation of China (No. 81101044), Shanghai Rising-Star Program, Special Program of Military Medicine of Second Military Medical University for the financial support.

References

**Fig. 1.** Chest radiograph shows a round air-containing lesion overlapping with the heart shadow in the lower field of the left lung.

**Fig. 2.** a Chest CT reveals a well-defined subpleural cystic lesion with an air-fluid level at the posterior basal segment of the left lower lobe. The anterior part of the margin (arrow) and a small nodule of 0.3 × 0.3 cm inside the lesion (arrow head) are prominently enhanced. b Lung window image shows ground-glass opacities around the lesion.

**Fig. 3.** Microscopically, the lesion was a sclerosing hemangioma of the lung with abundant vascular spaces surrounded by concentrated cuboidal epithelioid cells and polygonal tumor cells. H&E stain. ×100.