Pulmonary Blastoma with Endobronchial Growth

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Key Words: Neoplasm, Pulmonary blastoma, Intrabronchial growth. (J Thorac Oncol. 2009;4:543–544)

A 39-year-old man was admitted to our hospital complaining of nonproductive cough for 2 weeks. Plain chest computed tomography (CT) demonstrated a well-defined soft tissue mass in the right upper lobe that looked like fingers. A normal bronchus of right upper lobe and its branches could not be shown. The mass was homogeneous density without cavitation or calcification, which enhanced moderately and homogeneously with contrast administration (Figures 1A, B). There was a low density lesion with air bubble in the right main bronchus without any enhancement (Figures 1A, B). The patient underwent flexible bronchoscopy and a large mucous plug was located approximately 1 cm distal to the carina and was removed. It almost completely obstructed the lumen of the right main bronchus. A 1 × 1 cm gray-white endobronchial nodule was located in the orifice of the right upper lobe bronchus. It nearly occluded the lumen and seemed to be a pulmonary carcinoma. The patient underwent a right pneumonectomy and mediastinal lymph nodes dissection without complications. A subtype of pulmonary blastoma (PB)–well-differentiated fetal adenocarcinoma was histologically diagnosed (Figure 1C). All lymph nodes and

FIGURE 1. Coronal contrast-enhanced reformatted computed tomography (CT) scan (A, mediastinal windowing; B, lung windowing) shows a “gloved fingers”-shaped moderately enhancing endobronchial mass in the right upper lobe. There was no associated atelectasis or obstructive pneumonia. The nonenhancing mucus plugging in the right main bronchus could also be seen (arrow). C, Histopathological examination of the tumor showed that the epithelial components characteristically exhibited complex “endometrioid” glands resembling fetal lung, which is typical of pulmonary blastoma of the well differentiated fetal adenocarcinoma type (hematoxylin-eosin, original ×400).
surgical margins were free of malignancy. Postoperatively, the patient completed four cycles of chemotherapy with carboplatin and paclitaxel. At following up 2½ years later, he was well and clinically free of disease. A recent low-dose chest CT showed postoperative changes without any evidence of recurrence.

Radiologically, PB frequently develops in the periphery of the lung as a rapidly growing well-demarcated large mass with upper-lobe predominance, which may be bulky enough to completely opacify the whole hemithorax and cause mediastinal shift. On chest CT, PB is a mixed solid and cystic lesion with variable contrast enhancement, calcification is very rare. Although PB may show endobronchial growth, the “gloved finger”-shaped mass of our case was entirely intraluminal without any extraluminal component. There has been only one case of PB manifesting as hilar mass with fingerlike parenchymal opacities.

REFERENCES