

Fig. 4. The resected tumor (arrow) in the left upper lobe was 38 × 32 mm in size with a relatively regular margin and a solid and elastically soft interior. **A:** Left upper lobe. **B:** A cut surface of the tumor.

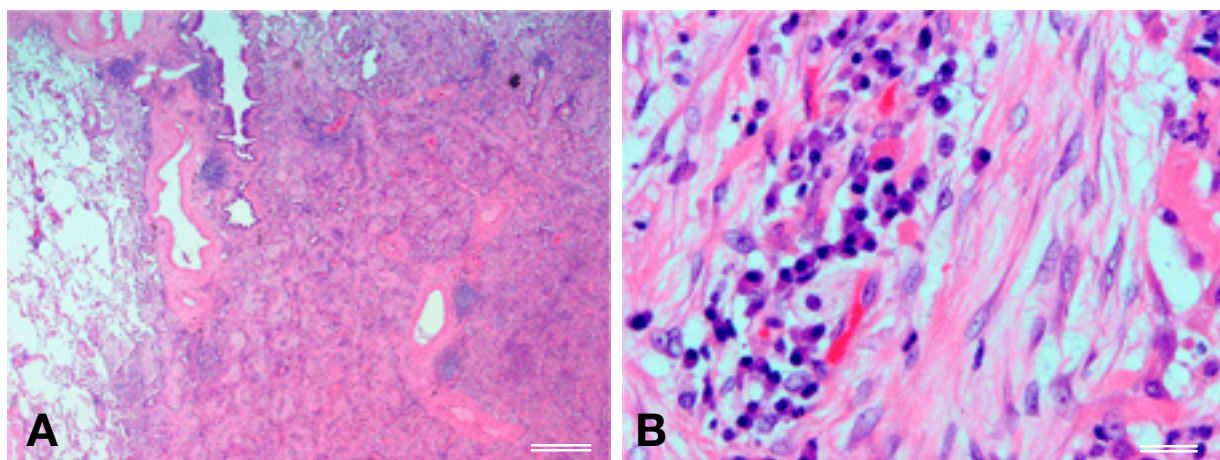


Fig. 5. Pathological findings showed inflammatory cell infiltration involving lymphocytes and plasma cells, fibrosis and spindle-shaped mesenchymal cells with hematoxylin and eosin staining of low power field (**A**) and high power field (**B**). Bar = 500 μm in **A** and 50 μm in **B**.

Discussion

Inflammatory pseudotumor of the lung is a solitary, non-neoplastic, space-occupying lesion in which collagenic fiber, inflammatory cells and mesenchymal cells are blended together in various amounts (Bernardi et al., 1983). In 2000, Cerfolio et al. reported that among 56,400 patients treated with chest surgery over 50 years at the Mayo Clinic, inflammatory pseudotumor of the lung was observed in only 23 patients (0.04%), of which 18 patients (78%) were involved with symptoms such as coughing, hemoptum, shortness of breath and chest pain (Cerfolio et al., 2000). In imaging

modalities, the pseudotumor is seen as an isolated and well-defined shadow with a round to oval shape, and clinical differentiation from lung cancer is often difficult (Ishida et al., 1989; Kobashi et al., 2006). In the present patient as well, we suspected lung cancer from the clinical symptoms and image findings, and performed the CT-guided lung biopsy, but no malignant cells were observed. However, FDG-PET of the tumor further showed a high FDG uptake, so we highly suspected lung cancer again and considered performing video-assisted thoracic surgery. Recently, FDG-PET has been widely used as an adjunct for the diagnosis of lung cancer (Ung et al., 2007). A higher level of the standard FDG uptake is correlated to poorer prognosis

(Berghmans et al., 2008). However, FDG-PET often shows positive even for inflammatory lung disease. Of 66 patients with lung nodule shadows that were positive in FDG-PET, 7 patients were false positive for inflammatory lung disease: one of the 7 had an inflammatory pseudotumor of the lung (Higashi et al., 2001). Because inflammatory pseudotumor of the lung is a rare disease, application of FDG-PET has been seldom reported (Slosman et al., 1994). But, FDG-PET shows high FDG uptake for inflammatory pseudotumor of the lung, and differentiation from liver cancer or lung cancer is difficult (Kawashima et al., 2006). In addition, it is characteristic of FDG-PET that the hilar and the mediastinal lymph nodes also show positive, as observed in the present patient. FDG-PET is also useful in diagnosing metastasis of lung cancer to lymph nodes (Melek et al., 2008), which makes differentiation of lung pseudotumor from lung cancer more difficult. Even though inflammatory pseudotumor of the lung is benign, 3 of 5 patients with incomplete resection had a recurrence (Cerfolio et al., 2000), or 3 of 18 treated patients had a recurrence (Melloni et al., 2005). Therefore, we had no choice but to perform a left upper lobectomy in the present patient, because sufficient resection margins are required. The postoperative course was good, and we believe that this was an appropriate choice. Cases of recurrence after complete resection have been reported (Dehabreh et al., 1999) with some multiple tumor cases (Lee et al., 2005; Kobashi et al., 2006). We emphasize that the present patient will require a careful follow-up. Along with the progress in diagnostic imaging, inflammatory pseudotumor of the lung has been increasingly observed. The characteristics of FDG-PET findings should also be fully understood.

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Received June 20, 2008; accepted July 22, 2008

Corresponding author: Hiroshige Nakamura, MD