Centrally Located Squamous Cell Carcinoma of the Lung Mimicking Endobronchial Tuberculosis

Shigeki Umemura, MD, PhD,† Kenichiro Kudo, MD,† Takashi Ninomiya, MD,† Yasuhiro Shiote, MD, PhD,*† Hiromichi Yamane, MD, PhD,* Toshimitsu Suwaki, MD, PhD,† Atsuko Shirakawa, MD, PhD,‡ and Haruhito Kamei, MD, PhD*†*

Abstract: Here we report a case of centrally located squamous cell carcinoma of the lung mimicking endobronchial tuberculosis. On the basis of the white light bronchoscopic (WLB) findings, bronchial tuberculosis was initially suspected. But transbronchial biopsy of the lesion revealed squamous cell carcinoma. Autofluorescence imaging bronchovideoscopy (AFI) showed the lesion area as magenta. After four cycles of chemotherapy, the magenta area was markedly shrunk on AFI. Performance of AFI might be useful for differentiating centrally located lung cancer from endobronchial tuberculosis.

Key Words: Squamous cell, Lung cancer, Endobronchial tuberculosis, Autofluorescence imaging, Bronchoscopy.

(*J Thorac Oncol.* 2009;4: 1178–1179)

CASE REPORT

An 88-year-old man presented with a productive cough and hemoptysis for 3 months. The chest x-ray film and computed tomography scans showed a left lower lobe mass and peripheral atelectasis. Conventional white light bronchoscopy (WLB) revealed swollen and hyperemic mucosa diffusely covered with white material that extended from the left main bronchus to the peripheral bronchi (Figure 1*A*). Autofluorescence imaging (AFI) bronchovideoscopy (Olympus Optical Corporation, Tokyo, Japan) showed the lesion area as magenta (Figure 1*B*). Based on the WLB findings, bronchial tuberculosis was initially suspected. Gaffky smear and polymerase chain reaction of the bronchoscopic samples were performed twice, but all tests were negative for acid fast bacilli. Then transbronchial biopsy of the left main bronchus revealed squamous cell carcinoma.

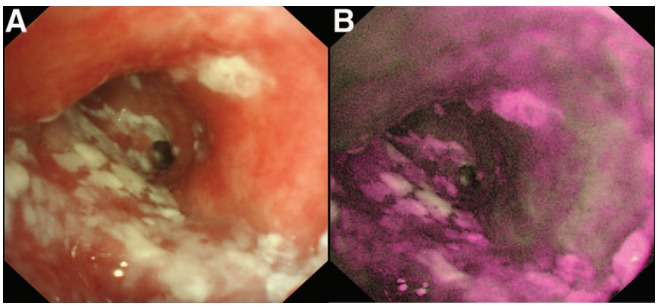

FIGURE 1. *A,* Conventional white light bronchoscopy (WLB) reveals swollen and hyperemic mucosa diffusely covered with white material. *B,* Autofluorescence imaging (AFI) shows the lesion as a magenta area.

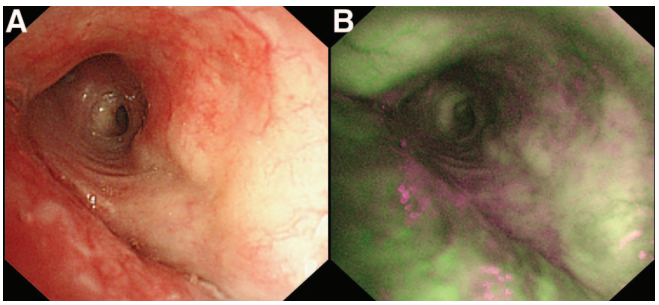

FIGURE 2. *A,* After four cycles of docetaxel therapy, conventional white light bronchoscopy (WLB) shows decrease of the whitish lesion. *B,* After four cycles of docetaxel therapy, autofluorescence imaging (AFI) demonstrates marked shrinkage of the magenta area.

The patient was diagnosed with stage IIIb squamous cell carcinoma of the lung (T4N0M0). He was treated with four cycles of docetaxel therapy (60 mg/m^2 on day 1 every 3 weeks). After these four cycles of chemotherapy, the whitish lesion was reduced on WLB (Figure 2*A*), and the magenta area was markedly shrunk on AFI (Figure 2*B*).

As occurred in this case, centrally located squamous cell carcinoma can manifest as bronchial lesions diffusely covered with white material on WLB alone, which is also the most frequent WLB finding of endobronchial tuberculosis.[1]

*Division of Clinical Oncology, Sumitomo-Besshi Hospital Cancer Center, †Division of Respiratory Medicine, and ‡Division of Pathology, Sumitomo-Besshi Hospital, Niihama, Japan.

Disclosure: The authors declare no conflicts of interest.

Address for correspondence: Shigeki Umemura, MD, PhD, Division of Clinical Oncology, Sumitomo-Besshi Hospital Cancer Center, 3-1 Ohji-cho, Niihama 792-8543, Japan. E-mail: ume-fuji@nifty.com

ISSN: 1556-0864/09/0409-1178

Recently, AFI has improved the diagnostic precision of fluorescence bronchoscopy and can accurately and objectively distinguish malignant lesions from bronchitis.[2] As in this case, performance of AFI might be useful for differentiating centrally located lung cancer from endobronchial tuberculosis.

REFERENCES

1. Chung HS, Lee JH. Bronchoscopic assessment of the evolution of endobronchial tuberculosis. *Chest* 2000;117:385–392.
2. Chiyo M, Shibuya K, Hoshino H, et al. Effective detection of bronchial preinvasive lesions by a new autofluorescence imaging bronchovideoscope system. *Lung Cancer* 2005;48:307–313.

