[PICTURES IN CLINICAL MEDICINE]

Mycobacterium tuberculosis Arising in a Solitary Pulmonary Cyst

Masaru Ando, Nobuhiro Fujishima, Hiroyuki Matsumoto and Jun-ichi Kadota

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Picture 1.

Picture 2.

An 87-year-old woman presented with a right S6 nodule on high-resolution computed tomography (Picture 1b). Two years earlier, she had been diagnosed with sarcoidosis and observed without treatment. The site coincided with an already-known solitary cyst (Picture 1a). Two years ago, she had presented with polyradiculitis and uveitis. High-resolution computed tomography (HRCT) revealed a solitary cyst at S6 superimposed on the diffuse small nodular shadows (Picture 1a) and a transbronchial biopsy specimen showed noncaseating granuloma composed of epithelioid histiocytes and Langhans' giant cells (Picture 2). Microscopy of the biopsy samples and culturing of the bronchial aspirate were negative for acid-fast bacilli. The histopathological diagnosis was sarcoidosis. We regarded her as having cancer or fungal infection arising from a longstanding pulmonary cyst. The results of polymerase chain reaction for *Mycobacterium tuberculosis* in sputum and bronchial alveolar lavage fluid were positive; furthermore, *M. tuberculosis* was cultured in the liquid medium of sputum and gastric fluid samples. After nine months of treatment with rifampicin, isoniazid and ethambutol, the pulmonary nodule was reduced in size and transformed into a funicular shadow

(Picture 1c). An infected lung cyst of *M. tuberculosis* arising from emphysematous bullae is rare (1), and there have been no reports about *M. tuberculosis* arising from a solitary pulmonary cyst. The consecutive HRCT findings suggested that *M. tuberculosis* can develop in the lumen of a pulmonary cyst. Several studies have shown the presence of *Mycobacterium* DNA in sarcoid granuloma, whereas others have reported conflicting results (2). Furthermore, the coincidence of sarcoidosis and *M. tuberculosis* is very rare. The relationship between these diseases is unclear and remains controversial.

The authors state that they have no Conflict of Interest (COI).

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Department of Respiratory Medicine and Infectious Diseases, Oita University Faculty of Medicine, Japan

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Correspondence to Dr. Masaru Ando, mando@oita-u.ac.jp

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