

Original Article

RESULTS OF SURGICAL RESECTION FOR NON-TUBERCULOUS MYCOBACTERIOSIS

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Abstract [Objectives] According to the guideline published from the Japanese Society for Tuberculosis, anatomical resection more than segmentectomy is recommended for non-tuberculous mycobacteriosis (NTM). Although the indication is limited, surgical resection has efficacy for NTM. The purpose of this study is to evaluate the efficacy in disease free survival (DFS) and postoperative complication of surgical resection.

[Methods] A total of 18 consecutive patients underwent resection of NTM in our institution between January 2012 and December 2017. Median follow-up term was 39.1 months. The recurrence was defined as postoperative positive sputum cultures or exacerbating lesions on radiological findings.

[Results] Median age at operation was 66. Subjects were 4 (22%) males and 14 (78%) females. Six patients (33%) had a history of smoking. Twelve (67%) had *Mycobacterium avium*, 3 (16%) had *M.intracellulare*, 2 (11%) had *M.xenopi*, 1 (6%) had *M.abscessus*. The surgical procedure included wedge resection (N=1; 6%), segmentectomy (N=2; 11%), lobectomy (N=11; 61%), lobectomy with combined

resection (N=4; 22%). Postoperative complications occurred in 2 patients and there was no mortality. In the follow-up periods, 4 patients developed recurrence and 3-year DFS was 85%.

[Conclusion] There were no severe postoperative complication and mortality. Surgical resection could be an effective treatment for pulmonary NTM.

Key words: Non-tuberculous mycobacteriosis, Surgical treatment, Postoperative complication, Disease free survival, Recurrence

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A CASE OF SECONDARY PNEUMOTHORAX AFTER A TREATMENT OF
MIXED INFECTION OF *MYCOBACTERIUM AVIUM*
AND *MYCOBACTEROIDES ABSCESSUS* SUBSP. *MASSILIENSE*

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Abstract: A 61-year-old woman with rheumatoid arthritis and connective tissue disease-related interstitial pneumonia visited our department for cavitation in upper lobe of right lung. She had been treated with oral methylprednisolone and 2 cycle of cyclophosphamide pulse therapy. Sputum acid-fast bacterium (AFB) culture was positive, of which mycobacterium was two species of nontuberculous mycobacterium (NTM), *M. avium* and *M. abscessus* complex. Each NTM was shown two times respectively and *M. abscessus* complex was identified as *M. abscessus* subsp. *massiliense*. So she was diagnosed as mixed infection of *M. avium* and *M. abscessus* subsp. *massiliense*. She was treated with clarithromycin, ethambutol, amikacin, imipenem and cilastatin first 2 months, followed by clarithromycin, ethambutol and faropenem. Sputum AFB culture became negative after 4 months from treatment started, and thereafter it was kept to be negative. But soon after she developed secondary pneumothorax. Air leak was shown from the cavity. This pneumothorax was not able to be treated

with conservative therapy and needed surgical treatment. Our experience of the present case suggest the treatment strategy of NTM mixed infections and the mechanism that NTM infection cause secondary pneumothorax.

Key words: Connective tissue disease-related interstitial pneumonia, Nontuberculous mycobacteria, *M. avium*, *M. abscessus* subsp. *massiliense*, Secondary pneumothorax

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Case Report

A CASE OF PULMONARY TUBERCULOSIS WITH SEVERE PANCYTOPENIA DURING THE TREATMENT, LEADING TO DIAGNOSIS AS APLASTIC ANEMIA AND LEADING IMPROVEMENT TREATMENT WITH METENOLONE ACETATE AND ELTROMBOPAG

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Abstract: Immunosuppression has bad effects not only on the incidence of tuberculosis but also on the treatment. In this paper, we reported a case that a patient developed aplastic anemia during the treatment of tuberculosis.

The patient, an 85-year-old man, was admitted to our hospital because of pulmonary tuberculosis. We started to treat him with three anti-tubercular agents: isoniazid (INH), rifampicin (RFP), ethambutol (EB). After two months of combination therapy INH/RFP/EB, EB was stopped according to a guideline that was published by the Japanese Society for Tuberculosis. Five months after the anti-tubercular agents were introduced, laboratory tests revealed severe pancytopenia. He had undergone bone marrow aspiration, which confirmed the diagnosis of aplastic anemia. This was thought to be a side effect of anti-tuberculosis agents. Therefore, we decided to change anti-tuberculosis agents from INH and RFP to streptomycin (SM) and levofloxacin (LVFX). As for aplastic anemia, we selected metenolone acetate and eltrombopag, because we needed to avoid immunosuppressive therapy due to pulmonary tuberculosis. After 13 months, he completed the treatment of tuberculosis.

Regarding aplastic anemia, laboratory tests did not show pancytopenia.

Some cases were reported that severe pancytopenia developed during the treatment of tuberculosis. It is necessary to pay attention to both side effects and accidental blood diseases. Additionally, when patients have pancytopenia during the tuberculosis treatment, we need to select a treatment that is both effective against tuberculosis and blood diseases.

Key words: Tuberculosis, Aplastic anemia, Immunosuppression, Eltrombopag, Pancytopenia

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