

Original Article

IMPACT OF COEXISTING NONTUBERCULOUS MYCOBACTERIA DURING THE TREATMENT OF PULMONARY TUBERCULOSIS

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Abstract [Background] Nontuberculous mycobacteria (NTM) are often detected in patients undergoing treatment for pulmonary tuberculosis. This clinical status is thought to represent NTM disease, contamination, or colonization, but discriminating between these three conditions is difficult.

[Purpose] We examined the clinical characteristics and pathogenicity of coexisting NTM among patients with pulmonary tuberculosis, as well as its impact on clinical practice.

[Patients and Methods] The subjects comprised 59 patients with pulmonary tuberculosis treated at the National Hospital Organization Utsunomiya National Hospital between January and December 2013. Patients in whom NTM was detected in one or more cultures were defined as the NTM group (19 patients), and they were compared to the non-NTM group (40 patients). Antiglycopeptidolipid (anti-GPL) core antibody titers were investigated in 18 patients from the NTM group.

[Result] We observed no significant difference in patient characteristics (age, sex, complications, history of pulmonary tuberculosis, lung disease, chest imaging findings, degree of smear positivity on admission) between the two groups. Mean duration of hospitalization was markedly longer for the NTM group, excluding those with coexisting NTM after

discharge (98.8 ± 7.9 days), than for the non-NTM group (58.3 ± 3.5 days; $p < 0.001$). No anti-GPL core antibodies were detected in any of the 18 patients from the NTM group, including 13 patients who fulfilled the ATS/IDSA criteria.

[Conclusion] Coexisting NTM observed during treatment for tuberculosis likely results from colonization or contamination and usually has low pathogenicity. However, this finding is related to prolonged hospitalization.

Key words: Nontuberculous mycobacteria, Pulmonary tuberculosis, Pathogenicity, Hospitalization, Antiglycopeptidolipid core antigen IgA antibodies

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EFFECT OF EDUCATIONAL LEAFLETS ON KNOWLEDGE AND ATTITUDE TO TUBERCULOSIS AMONG HOMELESS PERSONS IN TOKYO, JAPAN

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Abstract [Setting] Delay in seeking care is one of the critical issues in tuberculosis (TB) control among homeless persons in Japan. Yet knowledge of and attitude towards TB among homeless persons have remained unclear and limited efforts have been made to disseminate information related to TB among homeless persons.

[Objective] To evaluate the effect of TB leaflets, produced and distributed to homeless persons by a group of ex-homeless TB patients, and to understand what homeless persons know about TB.

[Design] Self-administered questionnaire was conducted among homeless persons before and after distribution of the TB leaflets. Changes in the responses to each question were also subjected to principal component analysis to group questions into types according to response patterns and identify constructs of TB-related knowledge.

[Results] Results of 88 participants were analyzed. TB knowledge score related to risks and symptoms significantly improved after the intervention (from 54.3% to 70.6%, $p < 0.05$), while knowledge on treatment cost did not. Two components were identified, namely, the “improvement in

TB impression” and “improvement in TB knowledge”.

[Conclusion] TB leaflets were effective in improving certain aspects of TB knowledge. However, its effect on knowledge regarding treatment cost, which may be crucial in improving delay, was limited and thus the messages need to be revised.

Key words : Knowledge survey, Education, Socio-economically deprived persons, Homeless persons

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Case Report

THE GENETIC EXAMINATION OF BRONCHIAL LAVAGE ENABLES THE PROMPT DIAGNOSIS OF PULMONARY *MYCOBACTERIUM KANSASII*—A CASE REPORT¹Masahide MORI, ¹Fumitaka AGESHIO, ¹Hiroyuki KAGAWA, ¹Yohei OSHITANI,¹Takeya FUJIKAWA, ²Haruko SAITO, ²Hajime SAKO, ¹Yukihiro YANO,¹Seigo KITADA, and ¹Ryoji MAEKURA

Abstract A 59-year-old man with chronic obstructive pulmonary disease and bronchial asthma presented at our hospital with an abnormal shadow on the chest radiograph, which was obtained as part of a routine medical examination. Computed tomography of the chest revealed two nodules in the right upper lung with the longest diameter measuring 29 mm and 10 mm, respectively. A granulomatous disease was strongly suspected based on the histological features of the transbronchial lung biopsy specimen. Results of smear examination for mycobacteria and genetic examination of the bronchial lavage aspirate by the transcription reverse transcription concerted (TRC) reaction method for *Mycobacterium tuberculosis* and *M.avium* complex (MAC), were both negative. However, three days after the bronchoscopic examination, an additional genetic examination by the TRC method confirmed the diagnosis of *M.kansasii* infection. About two weeks later, the culture results were positive and *M. kansasii* infection was re-confirmed with the DNA probe method. The patient responded well to treatment with a combination of isoniazid, rifampicin, and ethambutol. In Japan, among the nontubercu-

lous mycobacterial infections, the prevalence of pulmonary *M.kansasii* disease is second only to infection with MAC. However, it is often difficult to distinguish this disease from pulmonary tuberculosis. In this patient, a genetic examination with the TRC method enabled a prompt diagnosis of *M.kansasii* infection. The TRC method appears to be a useful tool for diagnosing nontubercular mycobacterial infections.

Key words: Nontuberculous mycobacteria, *M.kansasii*, TRC method, Bronchial lavage, Nodular shadow

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