Original Article

PRE- AND POST-RELEASE TREATMENT OUTCOME OF TUBERCULOSIS PATIENTS FROM CORRECTIONAL FACILITIES IN JAPAN

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Abstract [Objective] To investigate the treatment outcome of tuberculosis (TB) patients in prison, including those who have been released prior to completing their treatment.

[Methods] We conducted a national survey with all public health centers, which have one or more correctional facility in their jurisdiction. They were asked to provide information regarding TB patients who had been notified from correctional facility, including treatment outcome. For patients whose treatment outcome had been recorded as "transferred out" by public health centers, attempt was made to match them with data from the Japan Tuberculosis Surveillance.

[Results] Data of 58 patients were analyzed. Of them, 8 had been released while still on TB treatment, 22 were transferred to another facility, and 26 remained in the same facility throughout treatment. Treatment completion rate for three groups were 100%, 86.4% and 96.2%, respectively.

[Conclusions] Treatment outcome, even among those who had been released prior to completing their treatment in prisons, was high, indicating a relatively well-functioning referral between prison institutions and care in the community.

Key words : Tuberculosis, Prisoners, Treatment outcome

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Short Report

T-SPOT®.*TB* CONDUCTED AMONG PATIENTS WHOSE TEST RESULTS FOR QuantiFERON® TB GOLD WERE INDETERMINATE
— A Discussion Based on the TB Test Results —

Asuna ISHII, Noriko HAMAMOTO, Hirokazu FUKUSHIMA, Tsuyoshi KISHIMOTO, and Mamoru NAKAJIMA

Abstract [Objective] Because there are no indeterminate decision criteria with the QFT-Plus test, there is projected to be confusion at health centers in regard to determining test results and the action to be taken following the test. Therefore, we compared the QFT-3G and T-SPOT test results from tuberculosis screening based on laws and ordinances conducted at health centers in Saitama Prefecture and discussed the actions to be taken for conventional indeterminate test results.

[Subjects and Method] Among all examinees who were requested to take the tuberculosis screening from April 2014 to March 2018 and received indeterminate QFT-3G test results, the subjects were 465 examinees who took the T-SPOT test as a retest after the first QFT-3G test. We compared both test results.

[Outcome] Of the 465 examinees who received indeterminate QFT-3G test results, the test results of 342 examinees were negative with the T-SPOT test, while the test results of 59 examinees proved positive.

[Discussion] Because there is no indeterminate decision criteria for QFT-Plus, the 59 examinees whose test results changed to positive with the T-SPOT test would have been determined negative with the first QFT-Plus test after the test was introduced, meaning there is a risk of overlooking examinees who have a risk of infection and pathogenesis of tuberculosis. If the test results are within the conventional indeterminate decision criteria, it is important to make comprehensive decisions more carefully.

[Conclusion] With decision criteria having been changed since the introduction of QFT-Plus, it is necessary to present a policy regarding the actions to be taken for conventional indeterminate test results.

Key words : Tuberculosis, QFT-3G, T-SPOT, Indeterminate

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Case Report

A CASE OF A PATIENT WITH *MYCOBACTERIUM KYORINENSE* PULMONARY INFECTION WHO RECIEVED FULUOROQUINOLONE-MACROLIDE COMBINATION THERAPY BUT DIED THREE YEARS AFTER DIAGNOSIS

Toshikazu TERASHIMA, Masamichi YOSHIDA, and Atsushi FUJIWARA

Abstract A 78-year-old woman was visited to our hospital with abnormal shadows on chest radiographs and computed tomography (CT) in 2014. Chest CT revealed infiltration shadows and bronchiectasis in the right middle and lower lobes, suggesting mycobacterial infection. Sputum culture was positive for mycobacterium, but the mycobacterial species could not be identified by DNA-DNA hybridization (DDH) method. She was considered to have rare mycobacteriosis, and a wait-and-see policy was thus adopted. Thereafter, worsening of the infiltrates was observed with cavity formation. Sequence analysis of 16S rRNA and *rpoB* genes was conducted in 2016, which identified the bacterial species as *Mycobacterium kyorinense*. Thereafter, she was still managed by wait-and-see approach due to refusal to consent to treatment, resulting in worsening of the infiltrates and cavities. She was started on combination therapy with clarithromycin (CAM), moxifloxacin (MFLX) and streptomycin (SM) in March 2017. In August 2017, this treatment was switched to combination therapy with CAM and levofloxacin (LVFX). After the initiation of treatment, although the abnormal shadows on chest radiograph and CT did not worsen, her debility progressed and she died in November 2017.

Key words: *Mycobacterium kyorinense*, Nontuberculous mycobacterial disease, Elderly

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Case Report

MYCOBACTERIUM MASSILIENSE PULMONARY DISEASE UNDER NIVOLUMAB TREATMENT IN A PATIENT WITH LUNG CANCER

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Abstract A 80-year-old man with stage Ⅳ squamous cell lung cancer received chemotherapy with docetaxel; however, his tumor progression was shown. Afterwards, treatment with nivolumab as an anti-programmed cell death-1 antibody immune checkpoint inhibitor was given to the patient. We confirmed tumor regression after 10 cycles of nivolumab. Two months from this, the clinical symptoms of sputum and radiological progression of mass with satellite lesion occurred. *Mycobacterium massiliense* lung disease was diagnosed by sputum analysis. After multiple antibiotic treatment administration, nivolumab was restarted. Five months later, the mass lesion improved with good treatment response. Because it remains unknown about the potential correlation between immune checkpoint inhibitors and infectious disease such as *M.massiliense*, further studies are need to clarify the details of their association.

Key words: Pulmonary nontuberculous mycobacteriosis, Nivolumab, Lung cancer, *Mycobacterium massiliense*, Infection

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