

Original Article

## ANALYSIS OF THOSE "TRANSFERRED-OUT" AMONG PULMONARY TUBERCULOSIS PATIENTS IN JAPAN

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**Abstract** [Objective] To investigate the actual outcome of pulmonary tuberculosis (PTB) patients whose treatment outcome had been reported as "transferred out" under the Japan Tuberculosis Surveillance system, including those who had transferred out of Japan.

[Methods] Using the patient identification number, we linked the data of those PTB patients notified in 2015, and whose treatment outcome had been reported as "transferred out", with the data of patients registered at the end of 2016 (the "end of year" dataset). By referring to the reasons for terminating the treatment and the duration of treatment, we determined the actual outcome of those who had "transferred out". Sub analyses were conducted by age groups and country of birth.

[Results] Of the 14,123 newly notified PTB patients in 2015, treatment outcome was available for 13,971. Of whom, 518 were reported as "transferred out", and data of 510 were linked with the "end of year" dataset. Reason for terminating the treatment was entered as "treatment completion" for 306 of the 510 patients. Taking them into account improved the overall treatment success rate, that is cured and completed combined, from 52.8% to 54.9%. The proportion of trans-

ferred out was higher, and of those whose reason for terminating the treatment was "treatment completion" lower, among the foreign-born compared with the Japan-born patients.

[Conclusions] Approximately half of those who had been reported as "transferred out" has actually completed treatment. However, such proportion was lower among the foreign-born patients, highlighting the issue of cross-country referral of foreign-born patients who have decided to complete their treatment in their home countries.

**Key words:** Tuberculosis, Cohort analysis, Treatment outcome, Transfer-out, International transfer-out

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Short Report

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## CURRENT STATE OF PULMONARY TUBERCULOSIS AMONG UNIVERSITY STUDENTS

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**Abstract** [Background] Every 5 years, the Japanese National University Council of Health Administration Facilities (JNUHA) surveys the health status of university students to assess a variety of factors. The total number of cases of tuberculosis reported in Japan has declined in recent years. Also, the number of cases of Japanese tuberculosis decreased in 20s. However by increase of the number of the cases from countries where tuberculosis remain high prevalent, the number of tuberculosis cases remains at the same level at the 20s whole. In 2015, JNUHA conducted a study to investigate the circumstances of the appearance of pulmonary tuberculosis cases at universities, and compared the results with those of the previous studies.

[Methods] The Council conducted a questionnaire survey at 85 national universities to investigate the prevalence of pulmonary tuberculosis, and describe the characteristics of affected individuals.

[Results] 53 universities responded to the survey. The 2015 survey targeted 266,200 students, among whom 17 cases of pulmonary tuberculosis were reported. This incidence was lowest of the past 4 surveys. However, for the first time, of all the cases of pulmonary tuberculosis reported, the percentage of cases involving international students ( $n=11$ ) was higher than the percentage involving Japanese students ( $n=6$ ), and was also highest percentage recorded to date

(64.7%). All of the international students who were diagnosed with tuberculosis were from countries where tuberculosis remains common, and many had arrived in Japan during the previous year. These students' conditions were often identified during medical checkups.

[Discussion and Conclusion] This study further clarified the circumstances of the appearances of pulmonary tuberculosis cases in university student populations. The results of this study suggest the importance of performing medical checkups on international students from countries in which tuberculosis remains highly prevalent, shortly after their arrival to Japan.

**Key words:** Pulmonary tuberculosis, University student, High-burden country

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Case Report

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A CASE OF HIV AND TUBERCULOSIS CO-INFECTION  
WITH CERVICAL CUTANEOUS FISTULA AND ESOPHAGEAL TUBERCULOSIS  
FROM NECK AND MEDIASTINAL TUBERCULOUS LYMPHADENITIS

Kazuko MIYAKAWA, Nobuharu OHSHIMA, Atsuhsia TAMURA, Hirotoshi MATSUI,  
and Hideaki NAGAI

**Abstract** A male in his 20s, visiting doctor because of pus from the neck, was diagnosed with tuberculous lymphadenitis by acid-fast bacillus test of the pus and referred to our hospital. Fever and cervical cutaneous fistula were noted on the first visit. Based on the positive human immunodeficiency virus (HIV) antibody test, performed by screening, he was diagnosed with tuberculosis in HIV-infected patient. Computed tomography (CT) revealed a small gas collection in the mediastinum. Upper gastrointestinal endoscopy, performed considering the possibility of esophageal perforation, detected a deep ulcer in the middle esophagus, leading to the diagnosis of esophageal tuberculosis. It was speculated that tuberculosis of mediastinal lymph nodes around the esophagus had penetrated. After the diagnosis, he was started on anti-tuberculosis drug treatment and intravenous hyperalimentation with suspension of oral feeding. After the esophageal fistula was closed in 1.5 months, oral food in-

take was restarted. Antiretroviral therapy was started two months after the initiation of the tuberculosis treatment. Cervical cutaneous fistula was occluded in 6 months. We report a case of tuberculous lymphadenitis in HIV-infected patient with a simultaneous cervical cutaneous fistula and esophagus penetration.

**Key words:** HIV, Tuberculous lymphadenitis, Esophageal tuberculosis, Cutaneous fistula

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