

## BASELINE SCREENING USING INTERFERON-GAMMA RELEASE ASSAY SUGGESTS AN INCREASED RISK OF *MYCOBACTERIUM TUBERCULOSIS* INFECTION AMONG EMPLOYEES IN A JAPANESE GENERAL HOSPITAL

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**Abstract** [Objectives] This retrospective study aimed to assess the risk of tuberculosis infection for the employees of a Japanese hospital using baseline interferon-gamma release assay (IGRA). The risk was defined as exposure to the hospital environment.

[Methods] In total, 870 hospital employees including 161 new employees, 582 for baseline assay, and 127 for contact examination (709 subjects in the post-employment group) were examined from December 2010 to April 2012. The new employees were considered as the “non-exposure” group, whereas the post-employment group was considered as the “exposure” group. Multiple logistic regression analyses were used to calculate the odds ratio (OR) for IGRA positivity, adjusted for gender, smoking history, and alcohol intake (model 1), and for years of employment (model 2).

[Results] The exposure group was significantly associated with an increased risk of positive IGRA results, even when adjusted for years of employment (OR: 4.1; 95% confidence interval: 1.4–17.6;  $P=0.007$ ). Subgroup analyses stratified by profession indicated a significantly increased OR for laboratory technicians, doctors, and nurses in both models. No correlation was observed between the length of employ-

ment and IGRA positivity.

[Conclusion] Exposure to the hospital environment increased the risk of tuberculosis infection for employees irrespective of the length of employment. Laboratory technicians, doctors, and nurses were at the highest risk of infection.

**Key words:** Tuberculosis, Hospital-acquired infection, Contact examination, IGRA, QFT

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PULMONARY AND INTESTINAL TUBERCULOSIS DEVELOPING  
ACUTE TUBERCULOUS PERFORATION OF THE INTESTINE  
DURING ANTITUBERCULOSIS THERAPY

Miwako SAITOU, Tomoko SUZUKI, and Katsunao NIITSUMA

**Abstract** Intestinal tuberculosis (TB) was recognized as the most common complication with a high frequency of active pulmonary TB during the TB epidemic period. However, intestinal TB has become a rare disease, and intestinal perforation due to intestinal TB is extremely rare. We herein report two cases of tuberculous intestinal perforation.

[Case 1] A 41-year-old man was admitted to our hospital complaining of persistent cough and anorexia. He was in poor nutritional condition, and his body mass index (BMI) and prognostic nutrition index (PNI) were 13.4 and 36.4, respectively. He was diagnosed with pulmonary TB and received anti-TB therapy. On the 51st day of hospitalization, he developed intestinal perforation. Pathologically caseating epithelioid granulomas were noted at the ulcer lesion.

[Case 2] A 61-year-old man was admitted to our hospital due to miliary TB caused by intestinal TB. He had taken oral immunosuppressive drugs and steroids for dermatomyositis over the previous eight years and had a poor nutritional

condition, with a BMI of 13.4 and a PNI of 14.4. While receiving anti-TB therapy, he developed intestinal perforation on the 97th day of hospitalization.

The patient's poor nutritional condition and immune reconstitution may have contributed to the intestinal perforation.

**Key words:** Intestinal tuberculosis, Perforation, Lung tuberculosis, Poor nutritional condition, Immune reconstitution

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A CASE OF SPINAL TUBERCULOSIS WITH NEUROPATHY  
AMELIORATED BY DRAINING A TUBERCULOUS ILIOPSOAS ABSCESS  
WITHOUT SPINAL SURGERY

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**Abstract** A 75-year-old woman was referred to our hospital after a health check-up disclosed abnormal shadows in the bilateral lungs. The patient was admitted to our hospital after being diagnosed with pulmonary tuberculosis. A physical examination showed a mass in the left inguinal area. Enhanced computed tomography revealed that the tuberculosis involved several regions including the lumbar vertebrae, iliopsoas muscles, and left inguinal area. A therapeutic regimen consisting of INH, RFP, EB, and PZA was begun. Neuropathy in the lower extremities and dysuria indicated a spinal lesion, and spinal surgery was considered. However, the patient's history indicated that these symptoms were likely due to an iliopsoas abscess rather than a spinal lesion. This hypothesis was confirmed when the patient's symptoms improved with no sequelae after the abscess was drained. Our case demonstrates that spinal lesions as well as iliopsoas abscesses can

cause neuropathy, and underscores the importance of obtaining a patient's history to correctly diagnose the disease and determine the appropriate treatment options.

**Key words:** Tuberculous iliopsoas abscess, Spinal tuberculosis, Surgery, Neuropathy

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## NINETY YEARS OF THE JAPANESE SOCIETY FOR TUBERCULOSIS

— Back to the Future for Research and Control of Tuberculosis —

Toru MORI

**Abstract** The 90 years since the foundation of the Japanese Society for Tuberculosis in 1923 can be divided into three periods by three turning points, i.e., epidemiological transitions: 1911–1950 (the first period), 1953–1980 (the second period) and 1980–present (the third period). The progress of the Society is overviewed for each of these periods, and the several specific areas of research and control efforts are discussed. The first period might be viewed as a preparatory phase during which various tremendous efforts were made in basic, clinical, and epidemiological research that would bear fruit during the second period. Following this period, modern technologies were introduced into the national tuberculosis control program accompanied by related basic research, including the development and evolution of the theory of TB pathogenesis, X-ray diagnosis, and clinical trials of chemotherapy, of which the Society has been very proud. The problems of activities in the second period were carried over into the third period, together with the epidemiological

challenge of the slowing of epidemiological improvement. For this period, the bibliometric technique was applied in the trial of objectively analyzing the trends of research activities in publication. In addition, the USA's efforts to maintain awareness of TB, after the unexpected upsurge of TB during 1980s–90s due to its neglect in the past, were cited as lessons Japan should now learn.

**Key words:** Tuberculosis, History, Research, Bibliometrics

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