

## Original Article

## A CLINICAL EXPERIENCE OF RIFAMPICIN SUPPOSITORY FOR THE TREATMENT OF PULMONARY TUBERCULOSIS

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**Abstract** [Purpose] The usefulness of a rifampicin (RFP) suppository for treatment of pulmonary tuberculosis was examined in patients who had difficulty with oral consumption of medication.

[Subjects and Methods] Among inpatients receiving first-time treatment for pulmonary tuberculosis susceptible to both isoniazid (INH) and RFP, and who underwent standard 3- or 4-drug treatments including INH and RFP, we compared the number of days required for obtaining two and three consecutive negative sputum smears and cultures, respectively, in patients who received hospital-made suppositories or standard oral RFP administration.

[Results] There was no significant difference between groups in the number of days required for negative cultures and smears; although the times were equivalent, there were more number of elderly patients and those in generally poor

condition in the RFP suppository group than the oral intake group.

[Conclusion] RFP suppositories may be one method for administration of standard tuberculosis treatment in patients with difficulty in oral consumption of medication.

**Key words:** Pulmonary tuberculosis, Rifampicin, Suppository

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A CASE OF PULMONARY *MYCOBACTERIUM ABSCESSUS* INFECTION  
SUCCESSFULLY TREATED WITH SHORT-TERM CAM, AMK, AND IPM/cs  
FOLLOWED BY LONG-TERM ORAL CAM AND LVFX

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**Abstract** A 78-year-old woman who had been treated for two years with ITCZ for chronic pulmonary aspergillosis associated with prior pulmonary tuberculosis was admitted to our hospital because of general fatigue and hemoptysis along with deterioration of her chest radiographic findings. *Mycobacterium abscessus* had been isolated once from her sputum one year before admission. We performed fiberoptic bronchoscopy (FOB) in order to help establish a final diagnosis. Sputum aspirated from her bronchus on FOB stained positive for acid-fast bacilli and was negative for Tbc and MAC using PCR. From these results, we diagnosed the patient with pulmonary *M. abscessus* infection. Chemotherapy with AMK, IPM/cs, and CAM was initiated. Because her symptoms rapidly improved, we switched the chemotherapy to long-term oral CAM and LVFX, and she has been in a good condition at 12 months after the initiation of the therapy. Recently, subtypes of *M. abscessus* complex, such as *M. mas-*

*siliense*, have been recognized, which are more sensitive to chemotherapy. Considering the good response to therapy, there is a possibility that is the patient in the current case had a *M. massiliense* infection.

**Key words:** *Mycobacterium abscessus* pulmonary infection, Pulmonary aspergillosis, Chemotherapy

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 Report and Information
 

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## TUBERCULOSIS ANNUAL REPORT 2013

## — (3) Case Finding and Condition of Tuberculosis on Diagnosis —

Tuberculosis Surveillance Center (TSC), RIT, JATA

**Abstract** In 2013, tuberculosis (TB) case findings from the nationwide TB surveillance data in Japan were reviewed with regard to the mode of detection, symptom at diagnosis, diagnostic delay, proportion of far-advanced cavitory lesions, co-existence of human immunodeficiency virus (HIV) infection and diabetes mellitus (DM), and drug susceptibility testing (DST).

Among the 20,495 new TB cases in 2013, 83.1% were diagnosed when the patients sought medical attention for TB symptoms or attended medical facilities because of other chief complaints.

Among the 15,972 patients with pulmonary TB, 26.4% had only respiratory symptoms, 30.5% had respiratory and non-respiratory symptoms, 17.8% had only non-respiratory symptoms, and 24.5% were asymptomatic.

The proportion of patient and doctor delays among the 11,933 symptomatic pulmonary TB cases was analyzed. A large proportion—around 30%—of patients aged 45–54 years with symptomatic pulmonary TB exhibited a patient delay of  $\geq 2$  months. The proportion of patients with a total delay (i.e., the sum of patient and doctor delays) of  $\geq 3$  months exhibited a similar tendency to that of those with a patient delay. The proportion of patients aged  $\geq 65$  years with a doctor delay of  $\geq 1$  month surpassed that of age-matched patients with a patient delay. Among symptomatic smear-positive TB, a patient delay of  $\geq 2$  months exhibited a bimodal distribution, and its peak was  $> 35\%$ . The proportion of patient delay in those aged 30–39 years decreased compared to that of recent years. Meanwhile, the proportion of patients—approximately 15%—with a doctor delay of  $\geq 1$  month was relatively stable across all the age groups.

The proportion of patients with pulmonary TB who had far-advanced cavities in the lungs increased from 1.5% in

1975 to approximately 2% and then remained stable from 1985 to 2013.

Among the 50 new TB cases with HIV in 2013, 5 occurred in women and 10 in foreigners. From 2007 to 2013, there were 416 patients with newly diagnosed TB and HIV infections, 359 (86.3%) and 57 (13.7%) of whom were men and women, respectively, including 86 (20.7%) foreigners.

The proportions of newly diagnosed TB cases with DM in 2013 were 14.5% (2,964/20,495), of which 16.6% (2,072/12,504) occurred in men and 11.2% (892/7,991) in women.

The DST results were obtained through the surveillance system for 7,701 (73.2%) of 10,523 culture-positive pulmonary TB cases in 2013. In previously untreated patients, the proportions of patients with multi-drug resistant TB, any isoniazid resistance, and any rifampicin resistance were 0.4%, 4.5%, and 0.6%, respectively; meanwhile, in previously treated patients, the proportions were 3.7%, 8.0%, and 5.1%, respectively. In previously untreated patients, the proportions of multi-drug resistant TB and any isoniazid resistance decreased comparing with 2012.

**Key words:** Tuberculosis, Delay to diagnosis, Bacteriologically-positive, Cavity, Complication, Anti-tuberculosis drug susceptibility test

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## — The 89th Annual Meeting Educational Lecture —

DISSEMINATED NONTUBERCULOUS MYCOBACTERIOSIS THAT IS POSITIVE  
FOR NEUTRALIZING ANTI-INTERFERON-GAMMA AUTOANTIBODIES:  
A NEW DISEASE CONCEPT BASED ON HOST FACTORS

Takuro SAKAGAMI

**Abstract** Disseminated nontuberculous mycobacteriosis (NTM infection) is a disease that causes multiple organ lesions and occurs against an immunodeficiency background. Several host factors for this disease have been identified. Recently, neutralizing anti-interferon- $\gamma$  autoantibodies (IFN- $\gamma$  Ab) have been detected in some cases of disseminated NTM infection that had no previously known immunodeficiency, garnering attention as a new form of acquired immunodeficiency. We previously reported on methods for detecting IFN- $\gamma$  Ab in clinical specimens as part of the diagnostic process that are being used to evaluate suspected cases at various institutions. Overseas reports of positive results were achieved by administration of the anti-CD20 antibody rituximab in addition to antibacterial chemotherapy in cases of intractable disseminated NTM infection that tested positive for IFN- $\gamma$  Ab. This highlights the importance of diagnosis as well. Clinicians should consider the existence of this pathology. Although many host factors for NTM

infection have yet to be identified, IFN- $\gamma$  Ab positivity should be investigated further as a new disease concept, not only for its pathological dimensions but also from the standpoint of treatment strategies. In the future, more cases need to be examined and analyzed to obtain further epidemiological and pathological findings.

**Key words:** Disseminated nontuberculous mycobacteriosis, Neutralizing anti-interferon-gamma autoantibodies

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