

## EVALUATION OF TUBERCULOSIS TREATMENT INCLUDING LEVOFLOXACIN (LVFX) IN CASES WHO COULD NOT CONTINUE STANDARD REGIMEN

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**Abstract** [Objective] The purpose of this study was to evaluate tuberculosis treatment including levofloxacin (LVFX) and to investigate the effectiveness of changing drug regimens at our hospital.

[Subjects and Methods] A retrospective study was conducted on 331 patients with tuberculosis admitted to Tokyo National Hospital in 2005. Out of these 331 patients, LVFX was used in 48 (14.5%), 41 of which were initial-treatment cases. We studied why and how LVFX was used and compared bacteriological negative conversion rates between the initial-treatment cases in which the initial standard regimen was changed to regimens including LVFX, and those in which the initial standard regimen was either maintained throughout or modified with drugs other than LVFX. Sputum cultures were examined with Mycobacteria Growth Indicator Tube System (BACTEC MGIT 960).

[Results] LVFX was used in 41 (13.6%) of 302 initial-treatment cases and in 7 (24.1%) of 29 retreatment cases. Out of the 269 initial-treatment cases starting with the standard regimen, LVFX was later used in 26 cases (9.7%). The reasons for using LVFX were adverse reaction to antituberculosis drugs in 23 cases (88.5%) and resistance to antituberculosis drugs in 3 cases (11.5%).

We investigated the bacteriological conversion rate in 228 patients who could be followed up for more than five months. The conversion rates in 105 cases under the standard regimen including PZA (PZA+) were 92.4% in three months, 98.1% in four months, and 100% in five months. The rates in 56 cases

under the standard regimen without PZA (PZA-) were 92.9%, 98.2% and 100%, respectively. The rates of 22 cases under the initial regimen modified with LVFX (LVFX+) were 68.2%, 95.5% and 100%, respectively. In 45 cases under the initial regimen modified with drugs other than LVFX (LVFX-), the rates were 80.0%, 97.8% and 100%, respectively.

[Conclusion] This study showed that LVFX was an effective drug in terms of the bacteriological conversion rate, without adverse reaction. LVFX is not approved as an antituberculosis drug in Japan, but it is often used in cases of MDR-TB or in situations in which the patients cannot continue treatment with the standard regimen. We hope that LVFX will be approved as an antituberculosis drug as soon as possible in Japan.

**Key words** : Tuberculosis, Levofloxacin, Antituberculosis drugs, Bacilli negative conversion rate, Change of regimen

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## CLINICAL ANALYSIS OF NON-TUBERCULOUS MYCOBACTERIOSIS CASES COMPLICATED WITH PULMONARY ASPERGILLOSIS

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**Abstract** [Objectives] To clarify the clinical features of non-tuberculous mycobacteriosis (NTM) complicated with chronic pulmonary aspergillosis (CPA), we analyzed 257 cases diagnosed with newly developed NTM during the last 12 years in our hospital.

[Results] Fifty-six per cent of the patients were females. Ten cases (3.9%) of them were complicated with CPA in their clinical course. Mean age at the diagnosis of CPA was 65.5 years, and 8 of 10 cases were males. The average period from the diagnosis of NTM to CPA was almost 7 years. Six NTM cases were classified as the cavitary type and 4 as the nodular-bronchiectasis type. At the time of the diagnosis of CPA, NTM bacilli were isolated in 5 cases, but in the other 5 bacilli were not detected. Radiologically it was found that in many cases the infiltrative shadow had increased and the cavity wall had thickened. Antifungal drug administration was effective in

67% of the cases. In particular, in cases with progressive infiltrative shadows, the antifungal drug was effective in 83% of patients.

[Discussion] For the clinical management of NTM, careful attention to the complication of CPA is required.

**Key words:** Nontuberculous mycobacteria, Pulmonary aspergillosis, Antifungal drugs

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**Report and Information**

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**Abstract** The mode of detection, delays in detection, patient's occupation and so on were examined using the tuberculosis (TB) surveillance data from 2009.

Of the 24,170 TB patients newly notified in 2009, 82.1% were detected at medical institutions. Of those, 11.4% were detected during hospitalization with a disease other than TB and 9.2% were detected as outpatients with a disease other than TB.

On the other hand, a significant proportion of adolescents and young adults were also detected by active case findings (mass screening + contact examination). For example, 23.0% of TB patients aged 15–19 years were detected by periodic school mass screening, and 23.7% of TB patients aged 25–29 years were detected by periodic health examinations for employees. The proportion of TB patients detected by contact examination was only 2.6%; this figure was larger among younger TB patients. For example, 43.9% of those aged 0–14 years were detected by contact examinations.

In terms of the symptoms of 18,912 pulmonary TB patients, 28.0% had only respiratory symptoms, 30.9% had both respiratory and other symptoms, and 16.1% had only non-respiratory symptoms. The proportion of TB patients having

only non-respiratory symptoms increased among the elderly. More than 20.0% of symptomatic pulmonary TB patients over 75 years had only non-respiratory symptoms.

Regarding the delay of case detection among 14,511 symptomatic pulmonary TB patients, the patient's delay was shorter while the doctor's delay longer in the older age group, compared with the younger age group. Generally, sputum smear-positive symptomatic pulmonary TB patients showed longer total delays.

The proportion and number of nurses/public health nurses among female patients of 20–59 years were 10.2% and 322, increasing slightly from 9.3% and 300, respectively, in 2008.

**Key words:** Tuberculosis, Mode of detection, Delay of case finding, Occupation, Sex, Age

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