

Editorial

The Situation on the Admission and Discharging of TB Cases in Japan

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My interest and concern is now focused on pulmonary tuberculosis treatment strategy for admission and discharging criteria in Japan. Japanese Ministry of Health, Labor and Welfare (JMHLW) issued new criteria for admission and discharging of TB cases in 2007.

The criteria for admission are extended for the cases of the risk of *Mycobacterium tuberculosis* (TB) transmission and of the possible risk of treatment failure. The criteria for discharging are consisted of the 3 factors, (1) symptoms (cough, fever, etc.) are free after the standard chemotherapy of more than 2 weeks, (2) three different sputum smears are negative for acid-fast bacilli (AFB) after the standard chemotherapy of more than 2 weeks, (3) TB cases are estimated to adhere to the chemotherapy after discharging and understand the infection control of TB.

Although the criteria were simple, the goal was to treat TB cases successfully and improve treatment outcomes. For the effective operation of these criteria, the network of primary care facilities for early diagnosis and treatment after discharging, tuberculosis treatment facilities for hospitalization and local government including health care center is important.

From the point of view in tuberculosis treatment facilities, the shortening of hospitalization length by modifying the discharging criteria is recommended. However, from the point of view in the governmental service, it is emphasized that the regional medical system should be established for the treatment of discharged TB cases.

According to the present guideline in Japan, three consecutive negative sputum results for smear or culture are required for discharging of TB cases, making their duration of hospitalization extremely long. On the other hand, most of the TB ward in Japan consists of big rooms without air conditioning which carries a potential risk of TB transmission and re-infection. In order to establish effective TB control, suspected or confirmed TB cases should be isolated in a single room equipped with the capacity for airborne infection isolation during hospitalization, as long as sputum smear or culture remains positive. It is reasonable to discharge patients to home before sputum conversion if effective chemotherapy is provided and all household members have been previously exposed. Rapid drug sensitivity testing will be

helpful in assuring the effectiveness of chemotherapy for prompt discharge and detecting multidrug-resistance immediately.

Admission criteria for TB cases are based on the positive result of sputum AFB smear test in principle. But admission criteria should be applied flexibly depending on the extent and severity of illness, socioeconomic background of the case, and adherence to treatment in cooperation with the public health center.

The Japanese Tuberculosis Society published "Guidelines for Admission and Discharging of Tuberculosis Patient" in January 2005. This guideline was consistent with the notice from JMHLW. Improvement of management of TB cases is most important, but bacteriological conversion is not necessary to release isolation from the hospital. The TB cases treated with standard regimen over two weeks and having improvement of clinical symptoms may be able to go home back in the absence of compromised person. As a result of putting this guideline into practice, there were no problems about infectiousness for TB. But the modified notice from JMHLW based on bacteriological conversion was made public in September 2007. This modified notice brought in a prolonged period of hospitalization and created confusion in clinical practice. It is appropriate to use the guideline in January 2005.

In Japan, infectious pulmonary TB cases are ordered to receive chemotherapy in admission to TB treatment facilities according to Infectious Diseases Control Law in Japan. Infectious pulmonary TB is defined as sputum smear positive for AFB even it is questionable. And three consecutive negative sputum smear for AFB ordered to receive chemotherapy in admission to TB needed as a criteria for discharging. Medical service is needed owing to serious pulmonary TB, TB meningitis and other complications. The cost for hospitalization was estimated. During study period, 170 patients were admitted and only 36 patients (21%) were needed hospitalization on my facility's criteria. The other 134 patients were admitted because of infectiousness. The average hospital stay was 63.0 days and 64.8 days, respectively. Total cost of patients care was ¥26 million and ¥100 million respectively. From the point of view in saving medical costs, Infectious Diseases Control Law in Japan should be revised.

Standard treatment for TB led to a shortening of hospitalization days. After discharging, most TB cases are treated as outpatient. In the outpatient, the decreased numbers and the bias in the geographical distribution of tuberculosis hospitals impair TB cases accessibility and may lead to increase of drop out cases. And there is possible poor adherence to treatment in such as foreign-born TB cases from high burden countries, so intensive intervention will be needed for successful treatment. On the other hand, in the tuberculosis hospitals, there are noninfectious Tb cases with chronic complications such as psychiatric disorders

and dialysis. Most cases cannot be transferred to other hospitals or welfare facilities. To resolve these problems, it is necessary to build community DOTS system (I had introduced DOTS strategy to JMHLW firstly, then now DOTS strategy have been carried out in Japan) including the public health centers, tuberculosis hospitals and related community resources such as clinics and welfare facilities. Also, in the near future, it is necessary to review and rebuild tuberculosis medical system comprehensively at the national level.

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