

Original Article

CLINICAL REVIEW OF 8 PATIENTS WITH TUBERCULOUS PERITONITIS

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Abstract [Objective] With the progress of anti-tuberculous therapy, tuberculous peritonitis (TBP) has become a rare manifestation of active tuberculosis. Its early diagnosis is difficult due to lack of pathognomonic findings and specific symptoms. However, early diagnosis is important for effective treatment and for reducing fatality.

[Materials and Method] We retrospectively reviewed medical records of eight patients who were hospitalized with TBP in National Hospital Organization Omuta National Hospital during the periods between 2001 and 2009.

[Results] Three patients were males and five were females. The age of the patients ranged between 28 and 80 years old (average 67.3 years). The most common presenting findings were abdominal distention seen in four patients and loss of appetite in five patients. Blood examination suggested that most patients were in poor nutrition. Three patients were diagnosed based on bacteriological examination, two based on histopathological findings of caseating granulomas, two based on the elevation of adenosine deaminase activity in ascitic fluid and one based on clinical diagnosis. The most common CT findings were thin lines along mesenteric vessels representing thickened mesenteric leaves and smooth uniform peritoneal thickening. Most patients were treated with isoniazid,

rifampicin and ethambutol for 9 months with/without pyrazinamide initially. Seven patients completed anti-tuberculous therapy successfully and were cured. However, one patient died of the deterioration of tuberculosis.

[Conclusion] TBP should be considered for diagnosis, in patients with non-specific abdominal symptoms. Adenosine deaminase activity in ascitic fluid and CT images are considered to be useful for the diagnosis of TBP in patients in whom bacteriological and histopathological examinations are difficult to perform.

Key words: Tuberculous peritonitis, Peritoneal tuberculosis, Clinical finding, Diagnosis, ADA

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A STUDY ON PREVENTIVE MEASURES AGAINST TUBERCULOSIS IN CARE FACILITIES FOR THE ELDERLY IN A TOKYO METROPOLITAN DISTRICT

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Abstract [Objectives] To promote early detection of tuberculosis (TB) in care facilities for the elderly, we studied the pattern of occurrence of TB cases and the preventive measures taken against TB at the care facilities in a Tokyo Metropolitan District in 2008.

[Methods] Registration cards and contact examination records of the public health center of the district were reviewed. We also made a self-administered questionnaire survey to gather information about the preventive measures against TB at 40 facilities in our district. (The questionnaire response rate was 100%.)

[Results] A total of 4 TB cases were reported in 3 facilities in the study period. Two of the 3 facilities were fee-based homes. Adequate implementation of preventive measures against TB was not found at any of these 3 facilities. Secondary infection to care workers was also reported. Of the 40 facilities, 90% undertook annual routine TB examination with radiography. However, several facilities did not perform comparative X-ray readings, and had residents who did not comply with the examination. In regard to daily health monitoring, many facilities did not check for fever and/or respiratory symptoms. Many fee-based homes did not implement sufficient

preventive measures against TB.

[Conclusion] In the care facilities for the elderly in this district, the TB prevention program was not adequately implemented, so that new TB cases were not rare, leading to the transmission of infection to the facility staff. Especially, fee-based homes' practice was poor. It is an important mission of a public health center to provide these facilities in the district with information about current TB problem and its prevention, as well as technical support for it.

Key words: Tuberculosis, Care facility for the elderly, Fee-based home, Routine TB examination, Daily health monitoring, Public health center

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Original Article

**TREATMENT AND ISOLATION OF NON-ADHERENT AND/OR
INFECTIOUS TUBERCULOSIS PATIENTS
UNDER THE INFECTIOUS DISEASES CONTROL LAW**

Eriko SHIGETO

Abstract [Objectives] To clarify the present situation regarding isolation of tuberculosis (TB) patients who do not comply with hospital treatment or adhere to treatment.

[Methods] A mailed questionnaire survey to 252 hospitals having tuberculosis beds.

[Results] Answers were returned from 160 hospitals. Answers from 146 hospitals, excluding 14 that had closed their TB wards, were analyzed. Experiences of defaulters were reported from 35 hospitals. Seven of these defaulting patients were homeless, 4 were foreign-born, and 2 had other problems, but for 15 cases no problem was known. Fourteen hospitals reported that the burden of medical fee payment was one of the causes of defaulting. Defaulting occurred in hospitals even having close cooperation with public health centers over DOTS. For chronic excretors under long-term hospitalization, 31 (20.4%) hospitals allow home isolation, whereas 78 (51.3%) refuse discharge from the TB ward even for a short period. However, 69 (45.4%) answered that home isolation could be allowed under certain conditions. Only 17 (11.2%) think that current TB hospitals are appropriate for long-term hospitalization, and 63 (41.4%) feel that the improvement of the facilities for that purpose is needed. Seventy-two (48.3%) hospitals answered that confinement under detention should be mandatory, while 70 were against it.

[Conclusion] Since 2007 hospital treatment of tuberculosis

patients has been mandatory under the Infectious Diseases Control Law in Japan, but this study revealed that there are patients who leave the hospital in violation of the law. There is also a problem of non-infectious but non-compliant patients who are discharged for ambulatory treatment being likely to default and develop relapse. Because these patients are likely to develop M(X)DR-TB and may threaten the community, certain effective legal actions including hospitalization under detention should be imposed on them. At the same time, for chronic excretors with XDR-TB, home isolation should be allowed from the point of view of human rights, under clear conditions for infection prevention, together with the provision of a financial subsidy.

Key words: Directly observed treatment, Drop-out, Chronic excretors, Confinement, Home isolation, Human rights

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THE RELATIONSHIP BETWEEN THE NUTRITIONAL STATES OF TUBERCULOSIS PATIENTS AT THE TIME OF THEIR ADMISSION TO TUBERCULOSIS WARDS AND THEIR TREATMENT RESULTS

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Abstract [Objectives] To prospectively investigate the relationship between the nutritional states of tuberculosis patients at the time of their admission to tuberculosis wards and their treatment outcomes.

[Patients and methods] We observed body mass index (BMI), peripheral blood lymphocyte count, serum albumin concentration, and induration size in the PPD skin test of a total of 107 tuberculosis patients after they had been newly admitted to NHO Omuta National Hospital during the period from Aug. 2004 to Jul. 2006. Based on these indices, the patients were divided into four groups according to their nutritional states: severely impaired, moderately impaired, mildly impaired or normal.

[Results] It was shown that the worse the nutritional state was on admission, the higher the mortality rate from all causes including tuberculosis. There has been no relapse case in patients from this group who have completed tuberculosis treatment despite their poor nutritional states at the start of the treatment.

[Conclusion] This prospective study of the relationship between the nutritional states of tuberculosis patients on admission and their treatment outcomes reproduced the results obtained from a retrospective study that we had previously reported. The assessment method of the nutritional state that was used in our study was proven to be useful for predicting the prognosis of tuberculosis patients.

Key words: Tuberculosis, Nutrition, Prognosis

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————— **Review Article** —————

LEGAL ENFORCEMENT FOR NON-ADHERENT TUBERCULOSIS PATIENTS

Kunihiko ITO

Abstract [Purpose] To investigate the conditions that would allow for coercive measures for persistently non-adherent tuberculosis patients.

[Method] Literature review of the jurisprudential and medical papers, mainly of the United States.

[Result] We found relevant items in the following categories related to conditions allowing for coercive measures: truthful adequate purpose of the coercive measures, scientific evidence or prospects of effectiveness of the measures, individual risk assessment, existence of significant risk, proportionality principle, least restrictive alternative principle, and procedural due process.

[Conclusion] To establish a system of coercive measures for persistently non-adherent tuberculosis patients in Japan, we would first need to accomplish many tasks, including a

significant broadening of the support services for tuberculosis patients.

Key words: Tuberculosis, Infectious disease, Human rights, Legal enforcement, Detention

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PNEUMONITIS INDUCED BY RIFAMPICIN

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and ¹Takuya KURASAWA

Abstract An 86-year-old male with pulmonary tuberculosis developed fever, rash, and interstitial pneumonia 3 weeks after the beginning of treatment with isoniazid (INH), rifampicin (RFP), and ethambutol (EB). Chest CT showed new infiltration shadows that were diffuse bilateral ground-glass opacities mixed with dense consolidation and septal thickening, accompanied by a small amount of pleural effusion. Drug-induced pneumonitis was suspected, and therefore the antituberculous regimen was discontinued. The radiologic findings and symptoms improved promptly. A provocation trial with RFP led to fever, diarrhea, and rash. Therefore, RFP was considered to be the causative drug. INH and EB were reintroduced without any recurrence of the symptoms. Clinicians should be aware not only of paradoxical reactions but also of drug-induced pneumonitis, when a new pulmonary infiltrate develops in the course

of tuberculosis treatment.

Key words: Pulmonary tuberculosis, Rifampicin, Drug-induced pneumonitis, Drug lymphocyte stimulation test, Provocation test

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Abstract Statistics on tuberculosis (TB) in foreigners in Japan have been collected since 1998. The number of foreign TB patients increased from 739 in 1998 to 938 in 2009. In contrast, the number of Japanese TB patients decreased during this period. Hence, the proportion of foreigners among TB patients increased from 2.1% in 1998 to 4.0% in 2009, excluding those of unknown nationality. Especially, the proportion of foreigners among TB patients aged 20–29 years increased greatly from 9.1% in 1998 to 25.4% in 2009.

Although the number of nationalities was 38, the majority of patients in 2009 were from China (28.4%), the Philippines (23.6%) and Korea (13.8%).

The number of foreign TB patients aged 20–29 years was 427, accounting for 45.5% of all foreign TB patients in 2009. Eighty-one percent of foreign TB patients aged 20–29 years

had developed TB within 5 years of entering Japan. The equivalent proportions in those aged 30–39 years and 40–49 years were 49% and 29%. Regarding occupation, 37.2% of foreign TB patients aged 20–29 years were students, 27.2% were full-time workers and 11.7% were part-time workers.

Key words: Tuberculosis, Foreigner, Nationality, Sex-age specific, Trend, Regional distribution, Occupation

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