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—————— Original Article ——————

EXPERIENCE OF RAPID DRUG DESENSITIZATION THERAPY IN THE TREATMENT OF MYCOBACTERIAL DISEASE

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Abstract [Background] Drugs for tuberculosis and non-tuberculosis mycobacterial diseases are limited. In particular, no new drugs for non-tuberculosis mycobacterial disease have been developed in recent years. Antimycobacterial drugs have many adverse reactions, for which drug desensitization therapy has been used.

[Purpose] Rapid drug desensitization (RDD) therapy, including antituberculosis drugs and clarithromycin, has been implemented in many regions in Europe and the United States. We investigated the validity of RDD therapy in Japan.

[Patients and Method] We report our experience with RDD therapy in 13 patients who developed severe drug allergy to antimycobacterial treatment. The desensitization protocol reported by Holland and Cernandas was adapted.

[Result] The underlying diseases were 7 cases of pulmonary *Mycobacterium avium* complex disease and 6 cases of pulmonary tuberculosis. Isoniazid was readministered in 2 (100％) of 2 patients; rifampicin, in 8 (67.7％) of 12 patients; ethambutol, in 4 (67.7％) of 6 patients; and clarithromycin, in 2 (100％) of 2 patients.

[Conclusion] In Japan, the desensitization therapy recommended by the Treatment Committee of the Japanese Society for Tuberculosis have been implemented generally. We think RDD therapy is effective and safe as the other desensitization therapy. We will continue to investigate the efficiency of RDD therapy in patients who had discontinued antimycobacterial treatment because of the drug allergic reaction.

Key words: Mycobacterial disease, Antimycobacterial drug, Tuberculosis, Non-tuberculosis mycobacterial disease, Desensitization, Rapid drug desensitization therapy

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Short Report

ASSOCIATION BETWEEN SMOKING AND TUBERCULOSIS INFECTION

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Abstract [Purpose] Several reports show smoking as a risk factor of tuberculosis (TB) infection, especially in prisoners, emigrants, the homeless, or people in areas where TB is endemic. These reports mostly used the tuberculin test to detect TB. However, there is no report evaluating smoking as a risk factor of TB infection among people coming into contact with TB with the use of the Interferon-Gamma Release Assays (IGRA) test.

[Material & Method] We compared TB infection in smokers and non-smokers who came into contact with TB infection by using the IGRA test. We retrospectively collected information about people coming into contact with TB who visited the Daiichi Dispensary from July 1, 2011 to June 30, 2012. They were divided into 2 groups (IGRA positive or negative) and smoking (present/ past or never).

[Result] Out of 390 subjects who came into contact with TB examined, 229 were male and 161 were female. The mean age was 39.0 years, 98 were present smokers, 69 were past smokers, and 223 were never-smokers. There were 19 IGRA-positive and 371 IGRA-negative subjects. The IGRA positive rate was 4.9%. Out of 19 IGRA-positive subjects, 13 were smokers or ever-smoker (68.4%). Out of 371 IGRA-negative subjects, 154 cases were smoker or ever-smoker (41.5%). Smoking experience (present and past) was statistically significant in the IGRA-positive group. There were no significant differences in sex, age, drinking habits, and level of contact. Multivariate analysis showed smoking was only one independent risk factor for being IGRA-positive (odds ratio 3.06, 95% confidence interval: 1.14−8.21, p＝0.027).

[Discussion] Our results suggest that smoking experience in subjects coming into contact with TB is a risk factor for TB infection. TB cases in smokers are reported to be more severe and have delayed detection of disease. They are also more likely to infect those who come in contact with them. If TB source cases and their contacts are both smokers and co-exist in a narrow and limited area, the contacts might be at higher risk of exposure to TB-contaminated air than non-smokers.

Key words: Tuberculosis, Infection, Smoking, Risk

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Case Report

A CASE OF ANTITUBERCULAR DRUG-INDUCED TOXIC EPIDERMAL NECROSIS IN A SYSTEMIC LUPUS ERYTHEMATOSUS PATIENT DURING TREATMENT FOR PULMONARY TUBERCULOSIS

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Abstract A 48-year-old woman, who had been suffering from systemic lupus erythematosus for one year and receiving steroid therapy, was admitted to our hospital because of pulmonary tuberculosis. The tuberculosis was treated with INH, RFP, EB, and PZA after having doubled the dose of steroid, but terminated three weeks later due to the appearance of erythema exsudativum multiforme. Treatment was resumed with PZA, SM, and LVFX after resolution of the eruption. However, the addition of INH to the regimen provoked a recurrence of the eruption, which progressed rapidly to toxic epidermal necrolysis (TEN). Steroid pulse therapy stopped progression of the TEN, and treatment for tuberculosis was resumed. Although the choice of drug was rendered difficult by other adverse reactions, the patient was able to complete her tuberculosis treatment with RFP, EB, and TH. INH was most likely to be the offending agent in this case. Eruptions induced by antitubercular drugs are often seen, but there are few reports of severe toxic epidermal necrolysis.

Key words: Drug rash, Toxic epidermal necrolysis, Systemic lupus erythematosus, Isonicotinic acid hydrazide, Tuberculosis

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CONSIDERATIONS ON USES OF NEWLY DEVELOPED ANTI-TUBERCULOSIS DRUGS FOR MULTI-DRUG RESISTANT TUBERCULOSIS

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Abstract We, group of tuberculosis experts, made discussions over how to improve the quality of treatment of multi-drug resistant tuberculosis using a newly developed anti-tuberculosis drug, and at the same time, how to prevent the disadvantages of the treated patients and also that of persons who would be infected with newly produced drug-resistant bacilli, by preventing the emergence of resistance to the new drug. A series of proposals are made.

Key words: Multi-drug resistant tuberculosis, Anti-tuberculosis drug, Chemotherapy, Drug development

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