Original Article

RELAPSE AFTER STANDARD TREATMENT OF TUBERCULOSIS

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Abstract [Background] Risk of relapse after standard treatment of tuberculosis has not been evaluated recently in Japan.

[Objective] To investigate the risk of relapse after standard treatment of tuberculosis and its timing.

[Method] Multi institutional prospective cohort study of standard treatment cases of tuberculosis. Cases that completed the treatment are included in the analysis.

[Results] Among 284 cases evaluated, 127 cases prolonged treatment more than 6 months. Five cases relapsed including 4 culture positive relapse cases within 2 years, no relapse at 3rd and 4th year and 2 cases relapsed later. 2.1% of all cases relapsed by life table analysis until 2nd year and 4th year. Relapse was more observed among service industry workers. All relapse cases were smear and culture negative 2 weeks after starting treatment. Many cases with risk factors of relapse, such as diabetes mellitus cases and immunocompromised persons were treated longer than 6 months and these factors did not contribute for the relapse.

[Conclusion] No relapse was observed at 3rd and 4th year and follow up at 3rd and 4th year was not considered as necessary.

Key words: Tuberculosis, Standard treatment, Relapse

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Short Report

STUDY ON TIME-RELATED STABILITY OF BLOOD SAMPLE FOR QuantiFERON® TB GOLD AS AN *IN VITRO* DIAGNOSTIC FOR INFECTION WITH *MYCOBACTERIUM TUBERCULOSIS*

Kiyoyasu FUKUSHIMA, Toru KUBO, Yuko KANEKO, Naomi EHARA, and Toyoshi MATSUTAKE

Abstract [Object] Evaluation of blood sample stability stored at 4℃ for 32 hours after blood drawing for QuantiFERON TB Gold (QFT-3G).

[Materials and Methods] Blood samples from 27 donors were drawn into multiple lithium heparin (LiHep) tubes. The blood samples from one LiHep tubes were aliquoted into QFT-3G tubes at room temperature (Control group) and the other LiHep tubes were stored at 4℃ for 32 hours and then aliquoted into QFT-3G tubes (Study group). The QFT-3G test results using blood samples of the Study group were compared to those of the Control group.

[Results] Interferon-γ levels of the Study group (y) significantly correlated with those of the Control group (x): $y=0.979x-0.166$ ($n=27$, $r=0.982$, $p<0.01$). The total agreement between these two groups was 88.9% (24/27), with a positive agreement of 88.2% (15/17), and negative agreement of 90.0% (9/10). Discrepant interpretations were found in three instances, of which interferon-γ levels were in the vicinity of the cut-off point and within the expected limit of assay variation. The results of the Bland-Altman analysis did not show significant differences between these two groups.

[Conclusion] The results support single LiHep blood draw and storage at 4℃ for 32 hours prior to blood transfer to the QFT-3G assay tubes as there was no significant loss of reactivity found compared to standard methods.

Key words: Tuberculosis, QuantiFERON, Temperature, Blood sample stability

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Case Report

A CASE OF RHEUMATOID ARTHRITIS COMPLICATED WITH TUBERCULOUS PERITONITIS DURING TREATMENT WITH ADALIMUMAB

Shintaro SATO, Rie KAWABE, Masako AMANO, and Hidekazu MATSUSHIMA

Abstract The patient was a 68-year-old man who was admitted to our hospital because he developed a fever associated with ascites and diarrhea. 7 months after the beginning of adalimumab treatment for rheumatoid arthritis that was uncontrollable by using steroids and methotrexate. An abdominal CT scan revealed an increase of ascites and mesenteric fat tissue concentration. The examination of ascites showed elevated ADA at 164.7 IU/*l*. A definitive diagnosis of peritoneal tuberculosis was made through identification of *Mycobacterium tuberculosis* in culture of ascites and epithelioid cell granuloma in laparoscopic peritoneal biopsy. Peritoneal tuberculosis resolved along with the discontinuation of adalimumab and initiation of tuberculosis treatment. However, joint symptoms began to worsen gradually. When it became uncontrollable despite the gradual increase of steroids and methotrexate, abatacept was re-administered in place of biological agents after the completion of tuberculosis treatment. Since then, the patient had an uneventful course without any relapse or exacerbation of both tuberculosis and rheumatoid arthritis. We report this case in which we confirmed an efficacy and safety of re-administration of biological agent.

Key words: Biological agent, Adalimumab, Rheumatoid arthritis, Tuberculous peritonitis, Re-administration

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A CASE OF REFRACTORY PNEUMOTHORAX ASSOCIATED WITH *MYCOBACTERIUM INTRACELLULARE* WHICH WAS CURED BY SURGERY AFTER LONG-TERM DRAINAGE AND ANTIBIOTICS THERAPY

Yoshinori UCHIDA, Yumiko KAKIZAKI, and Yoshihiro MIYASHITA

Abstract A 67-year-old man with rheumatoid lung was admitted to our hospital because of fever, dyspnea and chest pain. Right-sided pneumothorax was recognized on a chest radiograph, and chest tube drainage was performed. A result of smear of the pleural fluid was positive. *Mycobacterium intracellulare* was identified by PCR method from the organisms of sputum and pleural fluid specimens. Pneumothorax and pleuritis were improved with percutaneous tube drainage and anti-nontuberculous mycobacteriosis (NTM) chemotherapy. But right-sided lung pneumothorax was not cured completely. A portable pneumothorax drainage kit during an outpatient stay and continued chemotherapy were effective for keeping his general condition. Endobronchial Watanabe spigots (EWS) procedure was failed to treat the pneumothorax in this case. Finally, surgical therapy was performed, and pneumothorax was improved. A portable pneumothorax drainage kit during outpatient stay for six months was useful for keeping general condition.

Key words: Pulmonary nontuberculous mycobacteriosis, Pneumothorax, Portable pneumothorax drainage kit, Rheumatoid arthritis, Interstitial pneumonia

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