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Original Article

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## EFFICACY OF CLOSED SUCTION DRAINAGE IN ANTERIOR SPINAL FUSION FOR LUMBAR SPINAL TUBERCULOSIS

Kazutaka IZAWA

**Abstract** [Objective] Recently, the effectiveness of closed wound drainage has been evaluated for various types of orthopedic surgery. Some studies showed insufficient evidence to support the routine use of a drain. In the current analysis, the efficacy of closed suction drainage in anterior spinal fusion for lumbar spinal tuberculosis was retrospectively evaluated. [Patients and Methods] Ninety-one consecutive patients treated from January 1997 to January 2016 were included. Before 2006, a closed suction drainage system was placed immediately before wound closure (31 patients). From 2007, no drain was used (60 patients). The two groups of patients were compared regarding postoperative laboratory data (hemoglobin, albumin, and C-reactive protein [CRP]), postoperative complications (deep hematoma, paralysis, wound infection, wound healing, and wound discharge), and healing of the tuberculous lesion. [Results] There were no significant differences in decrease of hemoglobin and albumin between the second and seventh postoperative day. On the other hand, CRP showed a significantly smaller decrease in patients treated with a drain. Deep hematoma and postoperative paralysis were not detected in either group. Surgical site infection was detected in two patients with a drain. Delayed wound healing was noted in three patients with a drain and one patient without a drain. Persistent discharge was noted in nine patients with a drain. All patients showed excellent healing of the tuberculous lesion. [Conclusion] Comparison between patients with and without a suction drain did not show any definite advantage of drainage. Therefore, the routine use of a drain in anterior spinal fusion for lumbar spinal tuberculosis is not recommended.

**Key words** : Spinal tuberculosis, Drainage, Postoperative complication

## A CASE OF *MYCOBACTERIUM INTRACELLULARE* PLEURISY DIAGNOSED BY PLEURAL BIOPSY

Akira SHINZATO, Shusaku HARANAGA, Kazuya MIYAGI, Masao TATEYAMA,  
and Jiro FUJITA

**Abstract** A case of pleurisy from *Mycobacterium intracellulare* is rare, and there have been no reports on the details of thoracoscopic findings. Here, we report a case of pleurisy caused by *M.intracellulare* in an 84-year-old woman, with a history of acute hepatitis B virus infection. Following her treatment of acute hepatitis B with steroid pulse and maintenance therapy, she visited the emergency department complaining of high fever and chest pain on her left side. She was diagnosed with pneumonia and parapneumonic effusion due to a chest X-ray showing left-sided pleural effusion, and admitted to our department for treatment. The analysis of pleural effusion revealed an increasing level of adenosine deaminase, therefore, tuberculous pleurisy was the tentative diagnosis. However, chest computed tomography findings on the lingular segment of the left lung suggested a nontuberculous mycobacteria pulmonary infection. Thoracoscopy was performed under local anesthesia. The findings of thoracoscopy showed multiple nodules and small clusters of fibrinous membrane adhesion in both the visceral and parietal pleurae. After pleural biopsy was performed, *M.intracellulare* was identified

using polymerase chain reaction and bacterial culture. Thereafter, this case was diagnosed as *M.intracellulare* pleuritis. After combination therapy with clarithromycin, rifampicin, ethambutol and streptomycin for *M.intracellulare* pulmonary disease, the patient improved and clinical symptoms subsided.

**Key words:** Nontuberculous mycobacteria, Pleurisy, Thoracoscope, Adenosine deaminase

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## CLINICAL EVALUATION OF THREE PATIENTS WHO DEVELOPED PULMONARY TUBERCULOSIS DURING DECREASED PERFORMANCE STATUS

Makoto TAKAHARA

**Abstract** Between January 2010 and June 2013, three hospitalized patients developed pulmonary tuberculosis during decreased performance status. They consisted of two men and one woman, and were over 60 years old. All of them developed repeated aspiration pneumonia frequently several months before the onset. Chest computed tomography (CT) scan demonstrated fibrotic changes, pleural thickness, and calcification of lung parenchyma or pleura before the onset. One case had previous history of tuberculous pleuritis. Two cases without previous history of tuberculosis underwent interferon-gamma release assay (IGRA) before the onset. One case was indeterminant and one case was positive. After they developed tuberculosis, consolidation, tree-in-bud appearance, centrilobular nodules, miliary nodules, and cavitary lesions were shown by chest CT scan. If elder patients with decreased performance status repeat aspiration pneumonia, chest com-

puted tomography and multiple sputum mycobacterium culture are necessary for excluding pulmonary tuberculosis diagnosis.

**Key words:** Performance status (PS), Chest computed tomography (CT), Interferon-gamma release assay (IGRA), Aspiration pneumonia

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————— Case Report —————

## A CASE OF MILIARY TUBERCULOSIS WITH OCULAR INVOLVEMENT

Keisuke KUREYA, Yasuhiro TAKAGI, Kazushi YAMAIRI, Yoshimi SUGAMA,  
and Satoshi SHIRAISHI

**Abstract** An 86-year-old woman had been treated with oral prednisolone at 3 mg/day for rheumatoid arthritis. In the beginning of June, 201X, she was admitted to the hospital because of fever and left ophthalmalgia. The left eye showed a red-colored nodule on the left bulbar conjunctiva, and the ophthalmological examinations revealed snow ball vitreous opacity. She was diagnosed with endophthalmitis, and administered antimicrobial and antimycotic drugs. However, her eye manifestation was not improved. Her chest X-ray images showed bilateral miliary shadows, and TB-LAMP of the sputum was positive. In addition, TB-PCR of the left eye aqueous humor was positive. Therefore, we diagnosed miliary tuberculosis with intraocular tuberculosis. After diagnosis, anti-tuberculous combination chemotherapy consisting of isoniazid, rifampicin, and ethambutol was immediately initiated. After 1 month of therapy, the inflammatory reaction was improved, and after 2 months of therapy, her eyesight

recovered slightly.

The time-delay in the diagnosis of intraocular tuberculosis lead to loss of eyesight. In advanced tuberculosis cases with eye manifestation, such as ophthalmalgia or eyesight decrease, it is necessary to consider intraocular tuberculosis as the differential diagnosis of eye manifestation in patients with tuberculosis. Therefore, early-stage cooperation with ophthalmology is important.

**Key words:** Intraocular tuberculosis, Miliary tuberculosis, Steroid

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