**PS 0646**  Respiratory Medicine

**Growth Promoting Effect of BCG Originated Supplement for Culture of Mycobacterium Tuberculosis**

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**Background:** M. tuberculosis culture is major technique for diagnosis of tuberculosis. Owing to the slow growth of M. tuberculosis, development of optimized culture media to enhance Mycobacteria growth rate have been required. Our preliminary data suggested that supplements originated BCG may be sufficient to improve growth of Mycobacteria.

**Methods:** BCG-Tokyo strains, widely administrated BCG Vaccines, were used as sources to develop the growth promoting supplement. Two species of supplement were prepared in a 4L culture of BCG-Tokyo strains with sauton media. To harvest autolysis by the DNA-DNA hybridization method. We identified patients who met diagnostic guidelines for pulmonary NTM disease when applied to patients with M. gordonae was isolated between 2003 and 2013 in our institution, which is a reference hospital for tuberculosis in South Korea.

**Results:** The enhancing effect of supplements to stimulate culture of M. tuberculosis was represented by liquid medium and solid agar culture systems. Both of supplements showed significant growth promoting effect in the 96well plate with 7H9 broth media calculated at OD 600. As the mycobacteria were plated on the supplements contained the effects of advanced TB growth both broth and agar culture systems.

**Conclusions:** According to our results, supplements originated BCG-Tokyo extracts showed an enhancing effect of bacterial growth. These culture supplements should be able to reduce the detection time for diagnosis of Mycobacterium tuberculosis infection.

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**Clinical Significance of Mycobacterium Gordoniae Isolates from Respiratory Specimens**

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**Background:** To date, the clinical significance of Mycobacterium (M.) gordonae isolated from respiratory specimens has not been well investigated. This study aimed to determine the clinical significance of M. gordonae isolated from respiratory specimens and the validity of the diagnostic guideline for pulmonary nontuberculous mycobacterial (NTM) disease as applied patients with M. gordonae.

**Methods:** A retrospective observational study was conducted on all patients from whom M. gordonae was isolated between 2003 and 2013 in our institution, which is a special hospital for respiratory disease in Osaka, Japan. M. gordonae was identified by the DNA-DNA hybridization method. We identified patients who met diagnostic criteria according to the guideline of the American Thoracic Society (ATS) for pulmonary NTM disease and confirmed final definitive diagnosis of such patients.

**Results:** M. gordonae isolates were found in respiratory specimens from 152 patients who were examined multiple times. A total of 10 patients met the diagnostic criteria based on pulmonary symptoms, abnormal radiographic findings, and multiple identifications of M. gordonae from respiratory specimens. Among these 10 patients, only 2 were confirmed as having pulmonary disease caused by M. gordonae. Colonization or contamination was diagnosed in the remaining 150 patients. The ratio of patients confirmed as having pulmonary disease caused by M. gordonae to those from whom M. gordonae was isolated, was 2/152 (1.32%). The positive predictive value of the ATS guideline for pulmonary NTM disease when applied to patients with M. gordonae was 20% (2/10 patients).

**Conclusions:** Occurrence of pulmonary disease caused by M. gordonae was rare and the present ATS guideline for pulmonary NTM disease may be inappropriate when applied to patients with M. gordonae.

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**Relationship Between Tuberculous Granuloma of Brain and Herpes Infection**

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**Background:** Developing disease after tuberculosis infection is depends upon an individual’s immunologic status, and severity or extensibility can be influenced by patient’s immunologic conditions.

**Methods:** All the patients were reviewed, who were diagnosed with tuberculosis between January 2011 to July 2014. Six patients had extended tuberculosis (multiple sites tuberculosis and/or miliary tuberculosis). Three patients were included, but three patients were excluded because of no checking of brain MRI or CT.

**Results:** All three patients had findings of tuberculous granuloma on brain MRI. Two patients among them were related to herpes infection. One of them had a current Herpes zoster infection on the chest. Another patient had a history of previous Herpes infection, and positive to serum HSV IgG and to CSF VZV IgG. Other patient had no history of previous Herpes infection. None of them had the history of HIV infection or the taking of immunosuppressive medication or steroid.

**Conclusions:** Exended tuberculosis with tuberculous granuloma of brain could be related to Herpes infection.

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**A Case of SVC Syndrome with Uncontrolled Pleural Effusion Due to Localized Fibrosing Mediastinitis**

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**Background:** Superior vena cava (SVC) syndrome is the condition induced by compression of SVC. Patient usually presents with symptoms like sudden dyspnea, facial and upper extremity edema.

**Case report:** We present a case of 81-years-old female visited our department with pleural effusion and dyspnea. After admission, she complained sudden dyspnea and rapid progressing facial and right upper extremity edema after about a month. Contrast-enhanced chest computed tomography (CT) at the moment showed suspicious 1.7cm poorly-defined mass encasing SVC and non-visualization of right brachiocephalic vein, while veins were patent on previous chest CT performed 2 weeks before. This change suggested the possibility of thrombosis associated with unknown malignancy. Pig-tail catheter insertion was done on right pleural cavity. Pleural fluid analysis revealed mixed pattern between exudate and transdate, with no malignant cells to be seen. Pig-tail catheter was obstructed three times by unknown cause and had to be changed each time. As patient’s pleural effusion and facial edema does not improve, surgical biopsy was planned. Grossly, severe calcification and anatheroplasty change was noted on lymph nodes around the SVC, compressing the great vein. Adhesiolyis without damaging adjacent organs and vessels was unavailable, so we engrafted the bypass around the SVC lesion. On surgical biopsy, there was no malignant cells in lymph nodes around SVC. Patient’s symptoms and pleural effusion were improved substantially after the graft surgery.

**Conclusion:** We present a rare case of benign anathroclastic lymphadenopathy clinically suspected malignant associated with SVC syndrome. which presented with suspicious SVC encasing mass and uncontrolled pleural effusion on chest CT.