

中文題目：瀰漫性結核感染併腦結核瘤以類似腦部轉移腫瘤的臨床及影像學來表現 - 個案報告

英文題目：Disseminated tuberculosis with multiple brain tuberculomas mimicking brain metastases clinically and radiologically – a case report

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Abstract:

Mycobacterium tuberculosis usually affects the lungs but it also affects other organs. Brain tuberculomas are hard to confirm due mostly to the lack of tissue proof. We report a case of disseminated tuberculosis with brain tuberculomas whose initial presentation mimicking metastatic brain tumors clinically and radiologically. After antituberculosis treatment, patient's neurological symptoms resolved and followed-up brain image showed markedly shrinkage of brain tuberculoma.

Case Presentation:

This 66-year-old male patient with hypertension, hyperlipidemia, and coronary artery disease status post stent placement presented with sudden onset of bilateral lower limbs weakness, unsteady gait and a 4-day history of slurred speech. He denied chronic cough, weight loss or fever. On neurological examination, dysarthria, bilateral lower limbs weakness (muscle power: Right/Left: 4 /3-4), and unsteady gait were found. The brain magnetic resonance imaging (MRI) showed lesions consistent with metastases at pons, right cerebellum, left frontal lobe and bilateral temporal and parietal lobes with perifocal edema. To survey tumor of unknown origin with brain metastases, the trans-rectal ultrasound-guided prostate biopsy was performed for mildly elevated PSA level (6.051, normal range 0-4 ng/ml). The fluorodeoxyglucose (FDG)-positron emission tomography/computed tomography (PET-CT) revealed a high grade FDG-avid lesion in the prostate gland and multiple hypodense lesions with decreased FDG uptake in the bilateral parietal, temporal lobes of cerebrum and right cerebellum. The pathology report of prostate biopsy showed caseating granulomas with presence of acid-fast bacilli demonstrated by Ziehl-Neelsen stain. The chest computed tomography (CT) revealed bilateral bronchiolitis, especially right upper lobe. Two sets of sputum acid-fast stain (AFS) collected 15 days after presentation did not found acid-fast bacillus. The human immunodeficiency virus (HIV) test showed negative and HbA1c level was within normal limit. The antituberculosis agents (anti-TB) with HERZ (isoniazid, ethambutol, rifampicin and pyrazinamide) were started on 16th day after admission for suspected urogenital tuberculosis. 4 days after

initiation of anti-TB, the fever and cough with purulent sputum developed. The repeated sputum APS revealed positive (3+). The paradoxical tuberculosis reaction was suspected and anti-TB was continued. The patient declined further brain lesion biopsy for improvement of neurologic symptom/sign after anti-TB treatment. The sputum culture later grew *Mycobacterium tuberculosis* complex, susceptible to all first-line agents. The diagnosis of disseminated tuberculosis involved with pulmonary, prostate and brain was made. During follow-up visits, the neurological symptom resolved without any sequelae and the serial brain MRI revealed markedly shrinkage of suspected brain tuberculoma. After 16-month treatment, the anti-TB was discontinued. Brain MRI 10 months after discontinuation of treatment revealed no significant change of remaining lesions.

Discussion:

Tuberculosis infection with multi-system involvement is common. Central nervous system (CNS) involvement accounts 1% of all tuberculosis. Although MRI was reportedly superior to CT for diagnosis of brain tuberculomas, it is still a diagnostic challenge. Here, we presented a case with disseminated tuberculosis with CNS involvement, initial mimicking brain metastases. The diagnosis of brain tuberculomas was made by treatment-response indirectly. Otherwise, the pulmonary and urogenital involvement were proved by microbiological and histopathologic evidence respectively.