

中文題目：脊椎結核病以脊柱旁軟組織鈣化點為表現

英文題目：Tuberculous spondylitis with calcification in the paraspinal soft tissue

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Introduction

Tuberculosis is a systemic disease and often infects the lung parenchyma. However, it can involve many extrapulmonary organs. Skeletal tuberculosis is one of the frequent extrapulmonary site and the spine is the most common area. Tuberculous spondylitis was first described by Percival Pott in 1779. The symptoms are often nonspecific and the disease progress is creeping. After the trabecular bone is destroyed over 50 %, the plain radiographic finding become visible. It made the early diagnosis became more difficult. In the advanced stage, neurological symptoms and spinal deformity developed and complicated the disease. Here, we present a tuberculous spondylitis (pott's disease) with calcification spot in paraspinal soft tissue before the typical cold abscess formation.

Case presentation

This 84-year-old patient had underlying disease of diabetes mellitus without regular medication control. He felt progressive dyspnea and poor appetite in recent 2 months. Not significant cough or fever was noted at home. But intermittent back pain was mentioned. He visited our hospital and CXR showed bilateral pleural effusion. Thoracentesis was done and the nature of effusion was borderline transudate. The body temperature was 37 C. Hemogram did not show leukocytosis but the CRP was 3.294 mg/dl. The renal function test showed BUN/ Cr: 94 9 /2.19 mg/dl and the liver function test showed GOP/GPT: 52/17 U/L. Albumin level was 3.2 g/dl. Effusion was not improved after initial management and the back pain was progressive after admission. Chest CT was arranged and it revealed irregularity of T6 and T7 disc space with destruction of opposing endplates (Fig 1), paraspinal soft tissue density with calcification spot from contiguous extension of the spine (Fig 2). Infectious

spondylitis was suspected from the imaging finding. Video-assisted thoracic surgery was arranged for etiology proof. The pathologic result revealed granulomatous inflammation with multinucleated giant cells and the acid-fast stain showed a small acid-fast (+) material. Tuberculosis infection was confirmed.

Discussion

The skeletal tuberculosis accounts for 3-10 % of the tuberculosis cases. Spine tuberculosis was about 50 % of the skeletal tuberculosis. The lower thoracic and lumbar spines are the most common affected site. The initial symptoms were not specific; include back pain, tenderness and body weight loss. Neurological symptoms or signs develop after the spinal canal was compromised nearly 50-60%. Laboratory data such as ERS or CRR can provide the hint of infection but cannot confirm the diagnosis. In our patient, active lung tuberculosis was not found from image and the results of sputum AFS and TB culture were negative. Around 50% of tuberculous spondylitis patients did not have intrathoracic tuberculosis evidence. Although the primary tuberculosis lesion was not seen, the mycobacterium tuberculosis may have spread out to the vertebral endplates through the blood or lymphatic circulation. The typical radiographical findings were adjacent end-plate irregularity, narrow intervertebral disc space, anterior wedging, direct extension to the surrounding soft tissues and paravertebral abscesses formation. Calcification within the abscess is a pathognomonic finding of tuberculosis. In our patient, calcification in the paraspinal soft tissue provided the clue of TB spine. After biopsy proof, the patient received anti-tuberculosis therapy. His generalized condition was improved much and the follow-up CXR showed improvement.