



LETTER TO THE EDITOR

Tuberculous Iliopsoas Abscess: Importance of Percutaneous Intervention Under Imaging Guidance for Diagnosis and Drainage



Tuberculosis (TB) caused by *Mycobacterium tuberculosis* is a public health problem and primarily involves the lungs. Extrapulmonary TB is found among immunocompromised patients, and increasingly among those with end-stage renal disease (ESRD).¹ Extrapulmonary TB involves the bones, skin, gastrointestinal system, urinary system, lymph nodes, pericardium, and central nervous system. We report the case of a patient with ESRD who developed lumbar spinal TB and consequent iliopsoas abscess, which was identified using percutaneous intervention under computed tomography (CT) guidance.

A 63-year-old woman patient who had been receiving hemodialysis for 3 years was transferred to our hospital 1 month after developing lumbago. All her lung field was clear on auscultation with normal respiratory condition (oxygen saturation on room air, 97%); her blood pressure and pulse rate were 130/70 mmHg and 96 bpm, respectively. Physical examinations showed tenderness of the lumbar spine. Hematologic and serologic tests on admission indicated elevation of erythrocyte sedimentation rate (61 mm/hour) and C-reactive protein level (10.3 mg/dL) suggesting inflammation, with a predialysis serum creatinine concentration of 7.9 mg/dL. Magnetic resonance imaging of the lumbar spine (Figure 1A) revealed a paravertebral lesion destructing a vertebra and an adjacent left iliopsoas lesion. Chest roentgenogram (Figure 1B) showed bilateral miliary shadows. On lumbar spinal CT (Figure 1C), the iliopsoas lesion appeared as a low-density area with an outer layer of egg-shell calcification. Both acid-fast bacterial staining and TB nucleic acid amplification [polymerase chain reaction (PCR)] of sputum and gastric fluid were negative. Because the TB-specific interferon- γ release assay (T-SPOT) yielded positive data, we performed CT-guided aspiration for the iliopsoas lesion immediately; 20 mL of pus was aspirated from the lesion, indicating an abscess, and percutaneous catheter drainage was started. Although the results of staining and PCR of the pus sample were negative, *M. tuberculosis* was isolated from this sample 3 weeks after bacterial culture. A definitive diagnosis of tuberculous iliopsoas abscess was made.

The patient received isoniazid, rifampicin, and pyrazinamide treatments, with the doses being adjusted according to hemodialysis therapy. Two weeks after initiating drainage, the catheter was removed due to lack of drainage, and the lumbago began to resolve 2 months after receiving the treatment. Antimicrobial susceptibility testing revealed that the isolate was susceptible to all anti-TB reagents. Sputum, gastric fluid, and blood cultures yielded no

mycobacterial growth. Follow-up spinal CT images (Figure 1C) indicated a decrease in size of the low-density area, suggesting an abscess. Pulmonary miliary shadows were improved on the chest roentgenogram (Figure 1B) approximately 4 months after receiving anti-TB therapy. Seven months after onset, the conditions had not recurred.

Early diagnosis of TB with atypical manifestations is important among patients undergoing chronic hemodialysis, because there is a high TB incidence in this community due to impaired immunity.² An ESRD case having bilateral iliopsoas abscess and Pott's disease (spinal TB and surgical treatment of paravertebral abscess) has been reported previously.² Spinal TB and iliopsoas abscess also developed in a healthy child and in an elderly individual.^{3,4} Clinicians should consider these conditions when an ESRD patient complains of unidentified lumbago; percutaneous intervention under imaging guidance must be performed immediately in such cases. CT-guided percutaneous catheter drainage of iliopsoas abscesses is an alternative therapeutic strategy.⁵ The percutaneous intervention might be a useful approach for diagnosis and drainage.

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Conflicts of interest: The authors have no conflicts of interest to declare in relation to this article.

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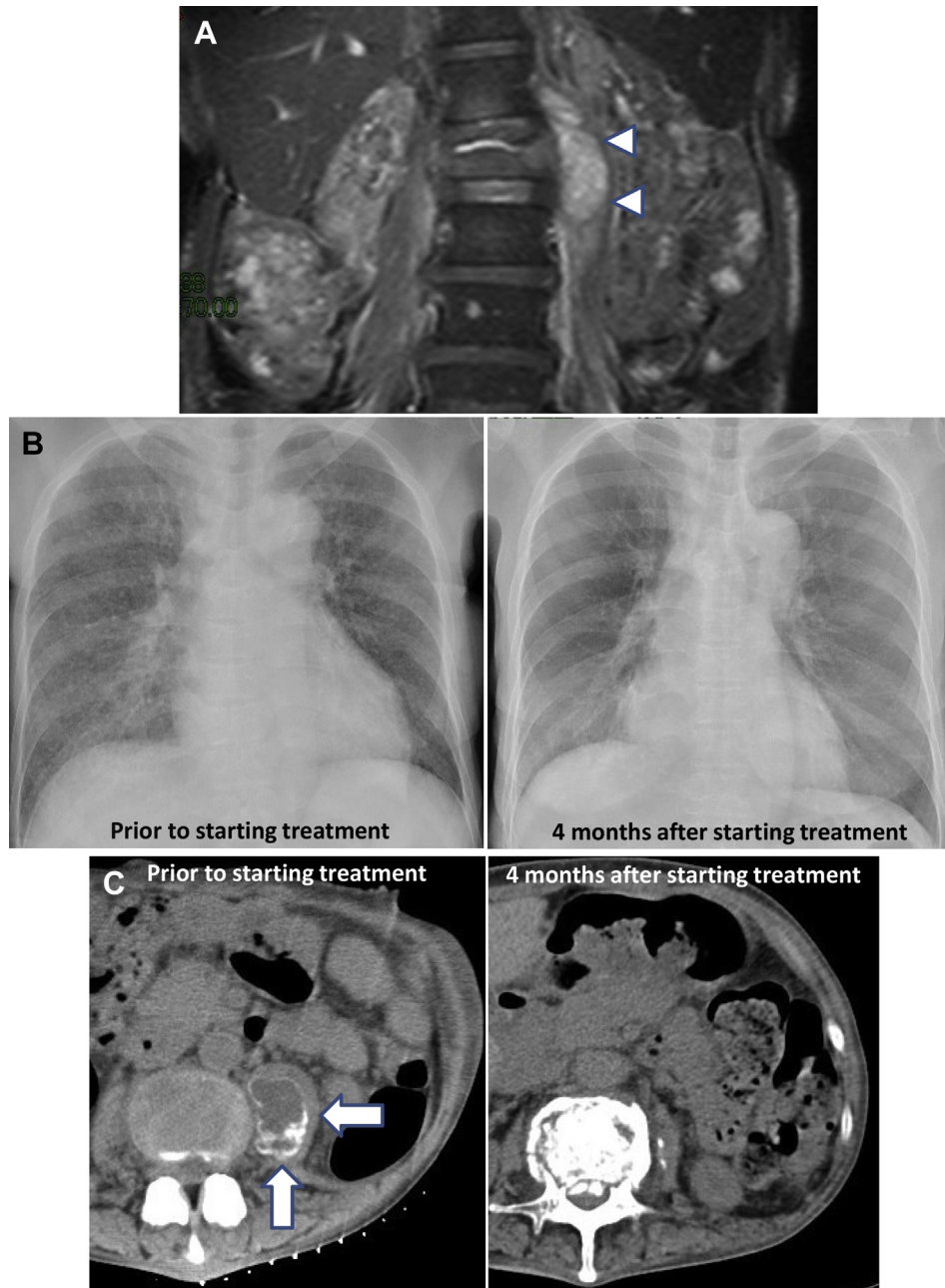


Figure 1 (A) Magnetic resonance imaging of the lumbar spine obtained on admission reveals a paravertebral lesion destroying a vertebra and an adjacent left iliopsoas lesion (arrowheads). (B) Chest roentgenogram on admission shows bilateral miliary shadows. (C) On lumbar spinal computed tomography (CT), the iliopsoas lesion appears as a low-density area with an outer layer of egg-shell calcification (arrows). Follow-up spinal CT images (C) indicate a decrease in size of the low-density area, suggesting an abscess. Pulmonary miliary shadows are improved on the chest roentgenogram (B) approximately 4 months after initiating antituberculosis therapy.