Tuberculosis of the trochanteric bursa: a case report

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ABSTRACT

Tuberculous trochanteric bursitis is rare. We report on a 48-year-old man with a huge gravitational abscess in the thigh secondary to tuberculosis of the trochanteric bursa.

Key words: abscess; bursitis; thigh; tuberculosis

INTRODUCTION

Tuberculosis in a bursa is rare. Its symptoms include swelling with negligible pain, warmth, and tenderness. The diagnosis can be made at the early stage of the disease. We report on a 48-year-old man with a huge gravitational abscess in the thigh secondary to tuberculosis of the trochanteric bursa.

Case report

In September 2009, a 48-year-old man presented with a 15-day history of a progressive painful swelling of his right thigh. He had no history of trauma, fever, or systemic symptoms. However, for the past 15 years, he had a small lump in the anterolateral aspect of his right thigh, and had intermittent, recurring pain and tenderness at the site. On examination, 3 masses measuring 15x15 cm, 10x15 cm, and 4x5 cm were found in the anteromedial and anterolateral side of the mid-thigh, and in the greater trochanter, respectively (Fig. 1).

His erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) level were 86 mm/hr and 2.98 mg/dl, respectively. The tuberculin skin test and interferon gamma by T-SPOT were positive. The total lymphocyte count was 2260/µl and the T-lymphocyte CD4/CD8 ratio was within normal limit (47/27).

The pus was drained and sent for cytological study, but was of no avail because of cytolysis. Radiographs revealed the lesion at the cortical margin of the right greater trochanter and there were scattered calcific spots in the soft tissue (suggestive of the caseous materials) over the greater trochanter and in the proximal and distal aspects of the lateral thigh (Fig. 2). Three-phase bone scanning showed a slight uptake in the right greater trochanter area.
(Fig. 3). Chest radiography was normal. Magnetic resonance imaging showed huge, multi-locular, fluid-containing masses with radio-opaque debris from the vastus to the gluteus (Fig. 4). The ESR and CRP level were checked regularly to assess the response to treatment. The cytological and culture studies of the drained discharge and cell blocks were repeated. Tuberculosis was suspected as there was no growth of pyogenic bacteria; a layer of lymphocytes and giant cells (instead of neutrophils and plasma cells) were found. Polymerase chain reaction (PCR) testing for tubercle bacilli was positive.

The patient underwent arthroscopic drainage, bursectomy, and tissue excision. Two suction drains were inserted for one week. There was no bacterial growth on culture of drained material; acid-fast tissue staining, PCR, and culture were also negative for tuberculosis bacilli. However, the diagnosis of tuberculosis of the right greater trochanteric bursa was made, based on the clinical presentation, nature of the pus, radiological and histological findings of chronic granulomatous inflammation with necrosis.

Four anti-tuberculous medications (isoniazid 400 mg, ethambutol 800 mg, rifodex 600 mg, and pyrazinmide 1.5 g) were prescribed for at least 6 months, but the patient took for only 4 months. Nonetheless, there was improvement in his clinical symptoms, ESR and CRP level.

In November 2010, the patient was re-admitted after a car accident. Radiographs revealed a remodelled greater trochanter, but the soft-tissue calcification remained unchanged. Thereafter, the patient was lost to follow-up again.

**DISCUSSION**

Primary tuberculous pyomyositis, bursitis, and tenosynovitis are rare and account for about 1% of skeletal tuberculosis. Tuberculous tenosynovitis most commonly involves tendons of the hand and wrist, whereas tuberculosis bursitis occurs most commonly around the hip.1-10

Tuberculous trochanteric bursitis is rare.2-4 Out of 147 patients with tuberculosis of the bursal sheath, 29 were in the trochanteric bursa, 21 in the bursa anserius, 18 in the compound plantaris bursa, 14 in the radial long flexor sheath, 10 in the ulnar long flexor sheath, 14 in the deltoid bursa, 8 in the ankle flexor tendon, 4 in the peroneal bursa, one in the wrist extensor tendon, 2 in the ankle extensor tendons, and 26 in...
miscellaneous intermuscular bursae.¹

All imaging modalities can help make the diagnosis,⁵–⁷ even when repeated cultures are negative.¹¹ In our patient, it was not known why PCR results changed from positive to negative in sequential studies. Possible reasons included changes in the patient’s immune condition, and different specimens might relate differently to PCR conversion. The diagnosis was made based on the interferon gamma test by T-SPOT. The diagnosis of extramedullary tuberculosis is usually delayed owing to a low index of suspicion for the condition. In our patient, the presentation was delayed for over 15 years, although he had had a lump in the thigh and intermittent pain during that period. The sudden increase in pain and swelling of the lump may have been due to suppressed immunity.

Optimal treatment for tuberculous trochanteric bursitis remains controversial. To reduce the risk of mycobacterial dissemination in those with extensive trochanteric involvement, anti-tuberculous chemotherapy should be started immediately before definitive diagnosis is made.⁸ Combined chemotherapy alone can eradicate the disease at any stage, although surgery is indicated when it is complicated. Reactivation of tuberculosis after anti-tuberculous treatment with or without surgery has been reported.⁹,¹⁰ In our patient, the swelling was severe and thus arthroscopic drainage, bursectomy, and anti-tuberculous therapy were performed immediately. There was no sign of reactivation after 14 months, although the bursitis could reactivate whenever his immune condition declines as his anti-tuberculous treatment course was incomplete. Regular follow-up is therefore essential.

DISCLOSURE

No conflicts of interest were declared by the authors.

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