

Case Report

Tuberculous sacroiliitis: a case report

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ABSTRACT

In 1-5% of cases of the infections of the musculoskeletal system are tuberculous. The sacroiliac joint (SI) shows involvement in 3-9.7%. Here, we describe the unique case of a 19-year-old female who presented with pain in the left buttock and low backache. Three months prior, the patient was diagnosed with pulmonary tuberculosis. The patient was started on anti-tuberculosis drugs (ATT) for three months. The pain increased on weight-bearing and on squatting, and it decreased with rest. X-ray and MRI were suggestive of Sacroiliitis secondary to tuberculosis. Now, after conservative management, the patient is symptom-free with no functional limitation. This case report focuses on the importance of continued awareness for early detection and treatment of a tuberculous sacroiliac joint infection.

Keywords: Skeletal tuberculosis, Tuberculous sacroiliitis, ATT

INTRODUCTION

The most common infectious cause of death which affects one-third of the population of the world is tuberculosis. The disease incidence in developing countries and urban areas is comparable due to excessive population segregation and the emergence of drug-resisting bacilli due to the endless use of non-specific antibiotics and decreased patient compliance. Of all the musculoskeletal system infections, tuberculous variety comprises 1–5% of cases.¹ 3–9.7% of the cases demonstrate the involvement of the SI joint.¹⁻³ A fact to consider is that most of the skeletal tuberculosis cases, particularly the SI joint, go unreported in developing countries. Because of their vague and non-specific clinical presentation, Sacroiliac joint infections are challenging to diagnose.⁴ Here, we report a patient with a sacroiliac joint tuberculous infection undiagnosed for quite some time.

CASE REPORT

A 19-year-old lady, a student in a rural area, was admitted to our institution complaining of left buttock pain and low backache. At that time, plain radiographs of the pelvis revealed no fractures; however, there were mild erosions at the left sacroiliac joint and no changes at the ischial tuberosity.

The patient refused any further investigation because her pain was adequately relieved with non-steroid anti-inflammatory drugs. A month later, the patient's buttock pain worsened. The pain radiated to the ipsilateral calf, increased on climbing stairs, walking long distances, and bearing weights and squatting. The patient had intermittent episodes of low-grade fever and night sweats. The patient is a known case of pulmonary tuberculosis and was

admitted for the same six months ago. She is taking oral medications since then.

The patient was admitted for buttock pain six weeks ago. On admission, the patient was walking with an antalgic gait. The left sacroiliac joint was tender on deep palpation and stretching manoeuvres, including lateral pelvic compression test, Patrick and Gaenslen's tests. The left hip joint motion was painful at the extremity. Left straight leg raising test was positive at 40°. There were no motor or sensitivity neurologic deficits in the lower extremities.

Spine examination revealed no tenderness – direct, thrust or rotatory and no palpable swelling or the local temperature rise. Per abdomen, findings were soft, non-tender without any organomegaly. Per speculum, findings were normal and healthy cervix and vagina. Per vagina findings, were uterus anteverted, bilateral fornices free.

Blood investigations suggest raised total count with lymphocytosis and moderately raised erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP). The diagnosis of tuberculosis was confirmed using an MRI of the hip joint.

The patient was given skin traction for three weeks with 3 kg weight, and she was allowed partial weight-bearing with a walker. After that, for another three weeks, gradually, the patient was allowed full weight-bearing. On follow-up at the end of 2 months, her complaints and clinical symptoms resolved entirely; the patient is now pain-free with no functional limitations. The patient was continued on a triple anti-tuberculous chemotherapy regimen including isoniazid (5 mg/kg body weight), rifampicin (10 mg/kg body weight), and pyrazinamide (35 mg/kg body weight). The patient was asked to continue physiotherapy for the left hip joint and a range of motion exercises.

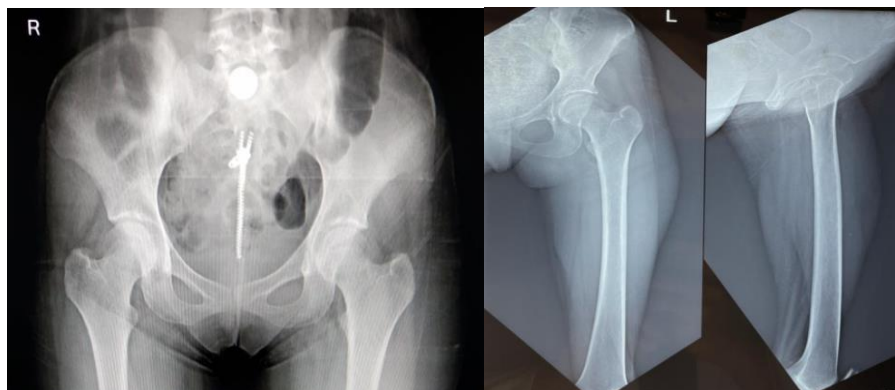


Figure 1. Radiographs showing both SI joints in AP view and Left SI joint in AP and lateral view respectively.



Figure 2: Radiographic films showing MRI scans of the hip joint.

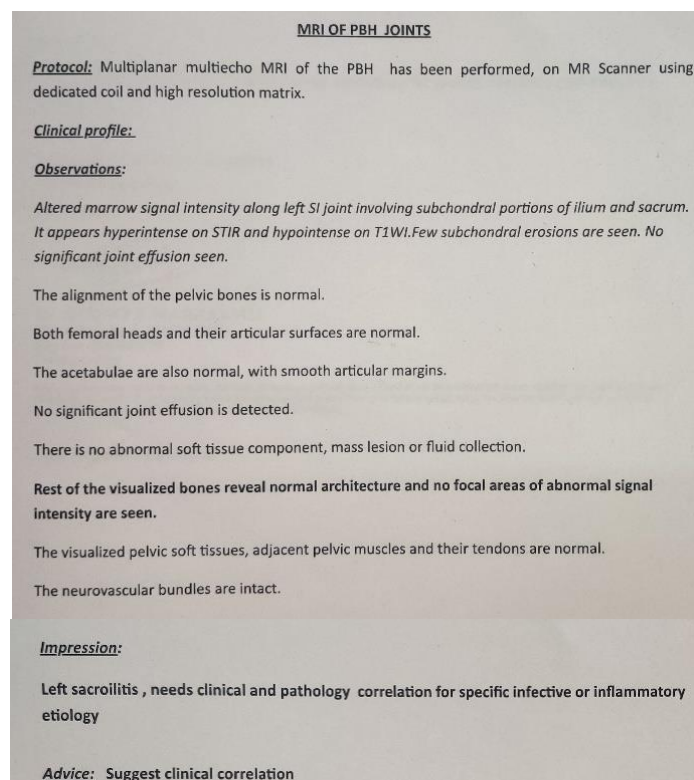


Figure 3: The report of the MRI of the hip joint.

DISCUSSION

The diagnosis of sacroiliac joint infection is often established lately. It is not infrequent for mycobacterial infections of the sacroiliac joint to present as a psoas abscess, and it may not be diagnosed until spontaneous drainage occurs in the groin.^{5,6} Buttock pain is invariably present in tuberculous sacroiliitis.⁴⁻⁶ The sacroiliac pain can be referred to the groin, posterior thigh, and occasionally below the knee, mimicking pain originating from the lumbar spine, the hip and the lower abdominal quadrant.⁶ There may be signs of femoral or sciatic nerve root irritation if the distended anterior joint capsule comes in contact with the lumbosacral plexus. The pain usually re-emerges or gets aggravated when the sacroiliac joint is mechanically strained during physical examination, weight-bearing, bending, sitting, or riding and is frequently resolved by standing or walking.⁵⁻⁸ Routine laboratory tests such as elevated ESR and CRP are not significant in establishing the diagnosis of tuberculosis but are considered helpful in assessing the response to anti-tuberculous therapy.³ Plain radiographs may not show any abnormality in the early stage of sacroiliac tuberculosis. Haziness or loss of joint line may be an early radiographic finding. However, CT or MRI are better for the early detection of sacroiliac tuberculosis.^{3,5} CT scan clearly shows the extent of joint destruction, and MRI demarcates the abscess in the soft tissues.^{3,5} MRI may also contribute to the differential diagnosis from a soft tissue tumour or pyogenic arthritis. Tuberculous sacroiliitis should be differentiated from degenerative and post-traumatic arthritis; pyogenic infection of the sacroiliac joint;

inflammatory diseases such as seronegative spondyloarthropathies, ankylosing spondylitis, psoriatic arthritis, Reiter's and Behcet's syndromes and inflammatory bowel diseases; connective tissue disorders such as rheumatoid arthritis and systemic lupus erythematosus; and hyperparathyroidism; tumours and tumorlike conditions, and pigmented villonodular synovitis.^{3,9,10} Pyogenic infection of the sacroiliac joint is usually hematogenous spread from cutaneous sources. Because blood circulation is sluggish in the ilium, the infection in this area may begin as osteomyelitis and then extend into the sacroiliac joint. Sacroiliitis occurring early in the course of the disease is usually the symbol of ankylosing spondylitis.³ However, a bilateral and symmetric distribution is observed in ankylosing spondylitis. In contrast, unilateral abnormalities and the absence of additional manifestations from the spine are most typical in infection, as in the present case. Generally, inflammatory and seronegative arthritis of the sacroiliac joints is usually bilateral. Peripheral joint involvements and other symptoms of the diseases, including urethritis, uveitis, rashes and bowel dysfunction, are commonly observed.¹⁰ Metabolic conditions commonly affect the sacroiliac joints bilaterally and are invariably associated with peripheral manifestations in other joints. Definitive diagnosis is obtained by fine needle aspiration or open biopsy. Acid-fast bacilli indirect smears and stains, the growth of the bacilli in the Lowenstein-Jensen culture or the granulomatous lesion identified in the histologic specimen will confirm the diagnosis of tuberculosis. Positive culture results and an antibiogram are desirable because fungal infection and brucellosis often yield similar

histologic findings.^{6,10} However, false-negative results should be anticipated in long-standing tuberculosis due to the paucibacillary nature of the disease. Before chemotherapy began, sacroiliac joint arthrodesis was considered valuable in accelerating the result, which, irrespective of the treatment, was the spontaneous ankylosis of the joint. Currently, multidrug anti-tuberculous chemotherapy is the treatment of choice for tuberculosis.¹¹ In this patient, we preferred to treat the sacroiliac joint lesion conservatively. Our patient had an excellent outcome. A similar response to either conservative or surgical treatment has also been reported.^{2,3,5,10} Recurrences are generally not anticipated.⁵

CONCLUSION

Early symptomatic diagnosis and confirmatory diagnosis of skeletal tuberculosis of the SI joint secondary to pulmonary tuberculosis is of prime importance, especially in young individuals, to avoid long term complications and increase functional outcomes. If detected early, the patient can be treated conservatively, and full functionality of the joint can be restored.

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