

Case Report

Tuberculosis of bilateral sacroiliac joints with bilateral psoas abscess: an unusual presentation

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ABSTRACT

Infectious diseases usually affect the sacroiliac joint unilaterally. Out of all tuberculosis cases, bone tuberculosis is reported in 3-5% of cases. The purpose of this case report is to draw attention to the diagnostic challenge of bilateral tuberculous sacroiliitis with psoas abscess, as this clinical picture is very rare. Tuberculosis of the sacroiliac joint is often missed due to vague symptoms. More often, patients are examined in the supine position, thereby overlooking the sacroiliac joint. Involvement of the sacroiliac joint is rare, but exact numbers are not available. Our case report shows a complication of skeletal Tb that a psoas abscess may develop, causing nonspecific symptoms.

Keywords: *Mycobacterium tuberculosis*, Sacroiliac joint, Sacroiliitis, Psoas abscess, Cold abscess

INTRODUCTION

Tuberculosis is one of the most well-known infectious illnesses in developing countries.¹ The diagnosis is usually delayed due to its uncommon presentation and low virulence. In the diagnosis of a disease clinician must be vigilant and appropriate investigation should be available at hand.² We came across such an atypical, unusual presentation of bilateral sacroiliac TB in a young male with secondary complications such as psoas abscess.⁽¹⁾ There are two types of psoas abscess. In the primary type, there is no primary focus of infection. It is believed that the source of infection is unrecognized staphylococcal bacteria in immunocompromised patients. The second type is more common. It is due to the spread of infection from intra-abdominal or vertebral infections like appendicitis, diverticulitis, vertebral osteomyelitis, or Crohn's disease. (REFF) The classic triad of psoas abscess is fever, abdominal/ back pain, with limited movement in the hip joint. Less than 50% of all patients have these symptoms because of the low virulence of bacteria. The psoas abscess is a cold abscess. Lack of inflammatory

signs leads to non-acknowledgment of the patient to notice the swellings. The non-specific presentation and lack of awareness of psoas abscess leads to delayed diagnosis and increased morbidity. TB of the sacroiliac joint with secondary psoas abscess is rare and characterized by slow progression.³

CASE REPORT

A 30-year-old man presented with low back and buttock pain of 9 months duration together with significant morning stiffness. No other articular or extra-articular manifestations were demonstrated. Based on the clinical presentation, elevated acute phase reactants (APR), and radiographic bilateral sacroiliitis, he was diagnosed with a case of spondylarthritis, and daily treatment with nonsteroidal anti-inflammatory drugs (NSAIDs) and physical therapy was started.

He reported to our centre the development of swelling in the bilateral lumbar region and persistent symptoms despite 6 months of physiotherapy. On examination, he

was afebrile, with bilateral psoas swelling and bilateral sacroiliac joint tenderness. A plain radiograph was performed and suggested bilateral sacroiliac (SI) joint involvement (Figure 1). Investigations revealed normocytic anaemia with elevated APR values, positive tuberculin test (18 mm), and negative human leukocyte antigen B27. Chest X-ray and abdominal ultrasound were normal. Magnetic resonance imaging (MRI) of the SI joints exhibits the bilateral abscess in the psoas muscle (Figure 2 A-C).



Figure 1: Plain radiograph of bilateral hips with the pelvis showing bilateral sacroiliac joint involvement.

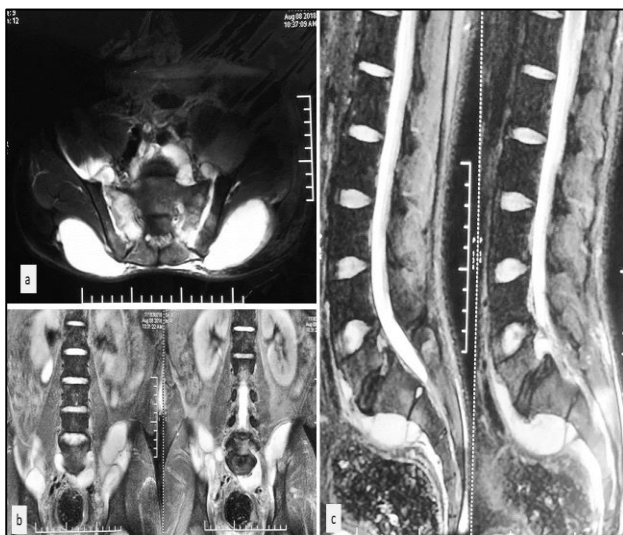


Figure 2 (A-C): T2 weighted MRI transverse section showing bilateral psoas abscess oedema around both SI joints; while MRI sagittal and coronal section showing collection around SI joint.

Polymerase chain reaction for Mycobacterium tuberculosis was positive on needle aspiration of the abscess by antigravity approach (Figure 3). The patient demonstrated clinical improvement and radiographic

resolution of the abscess after 6 months of conventional four-drug antitubercular therapy.

Patient Information		Quest Diagnostics Laboratory Report	
Name: 75105-766	Collected: 15/08/2018	Quest Diagnostics India Private Limited	
Lab No.: 14220891	Received: 11/08/2018	A-17, Mittal City, Sector 14, Gurgaon, Haryana - 122 001, India	
Age: 50 Years	Reported: 15/08/2018	Accredited By: COO-10000	
Gender: Male	Report Status: Final	A-17, Mittal City, Sector 14, Gurgaon, Haryana - 122 001, India	
Ref By:		Sent Parmanand Hospital, Sent Parmanand, Bind road Mission, 18, Shantam Marg, Civil Lines, Delhi, Delhi, India. Phone: 23594401	
DOB: Age: 50Y		Physician: Dr. Q00179214	
Gender: M		Phone: 23594401	
Order#	Collected Date/Time	Reported Date/Time	Status
2803329	08/08/2018	10/08/2018 06:22 PM	Final Report
Order Comments			
XPRT MYCOBACTERIUM TB & RIFAMPICIN			
SAMPLE TYPE	PUS		
MYCOBACTERIUM TB	DETECTED LOW		
RIFAMPICIN RESISTANCE	NOT DETECTED		

Figure 3: Lab investigation report (TB PCR).

DISCUSSION

The diagnosis of sacroiliac joint infection is often delayed because of the inaccessibility of the sacroiliac joint when examining the patient, and the failure of physicians to perform provocation manoeuvres of the sacroiliac joint.⁴

Sacroiliitis occurring early in the course of the disease is usually a characteristic feature of ankylosing spondylitis. However, in ankylosing spondylitis, a bilateral and symmetrical distribution is observed, while in infection, in contrast to this case, unilateral abnormalities and the absence of other manifestations from the spine are most typical. In general, inflammatory and seronegative arthritis of the sacroiliac joints is usually bilateral. Peripheral joint manifestations and other stigmata of the disease including uveitis, rash, and intestinal dysfunction are commonly observed. Osteitis condensans ilii can be present in predominantly multiparous females in the post-partum period and presented bilaterally.⁵

Buttock pain is always present in tuberculous sacroiliitis, other areas like the posterior thigh, groin, hip, and lower abdominal quadrant also display radicular pain. Sometimes it mimics sciatica pain as a distended anterior joint capsule comes into contact with the lumbosacral plexus.^{5,6} A series by Richter et al reported that 92% of patients were misdiagnosed and initially treated for lumbosacral radiculopathy or underwent unnecessary lumbar spine surgery.⁷

Psoas abscesses are a common symptom of mycobacterial infections of the sacroiliac joint, and they may not be recognised until they spontaneously drain.⁷ An enlarging lumbar abscess was the presenting symptom in this case.

Tuberculous sacroiliitis must be distinguished from degenerative and post-traumatic arthritis, pyogenic infection of the sacroiliac joint, inflammatory diseases like rheumatoid arthritis and systemic lupus erythematosus, connective tissue diseases (psoriatic arthritis, Reiter's and Behçet's syndromes, and familial mediterranean fever). Routine laboratory tests such as elevated ESR and CRP are not significant in the diagnosis of tuberculosis but are considered useful in assessing response to antituberculosis treatment.⁸ The current patient's ESR was significantly lower than normal, indicating a non-pyogenic infection

A plain radiograph may show no abnormality in early-stage sacroiliac tuberculosis. An early X-ray finding may be opacity or loss of the joint line. Radiologic features of sacroiliitis seen on conventional radiographs take several months to develop (e.g., joint erosion, loss of cortical margins, virtual joint space, or joint fusion). Bone marrow edema is an early symptom of sacroiliitis detected by magnetic resonance imaging (MRI). The joint effusion may be an early MRI sign with high predictive value. With the increased use of computed tomography (CT) to evaluate patients with unknown sites of sepsis or chronic pain, psoas abscesses are being diagnosed and reported more frequently. A bone scan is useful for early recognition of the condition. However, CT or MRI is more useful for the early detection of sacroiliac tuberculosis. MRI also contributes to the differential diagnosis of soft tissue tumors or pyogenic arthritis.⁹

Kim et al described two options for operative intervention; joint curettage in the early stages of the disease or curettage combined with arthrodesis when joint instability is assumed. The operative approach gives excellent results in view of residual disease and pain relief. The natural course of sacroiliac tuberculosis is bony ankylosis.¹⁰

Currently, multi-agent antituberculosis chemotherapy is used for tuberculosis. In the current patient, the authors opted for conservative treatment of the sacroiliac joint lesion. The therapeutic and diagnostic aspiration of the tuberculous psoas abscess gives the right course of treatment. The patient had an excellent outcome according to the healing criteria of Kim et al. Recurrences are generally not expected.

CONCLUSION

Tuberculosis of the bilateral sacroiliac joints is uncommon, with only isolated case reports. There is usually a lesion in the lumbar spine from where the psoas abscess spreads to both sacroiliac joints, but no such vertebral lesions were discernible in our case. Diagnosis is usually delayed due to the deep location in the pelvis and the absence of clinically detectable joint inflammation. Lack of awareness of the possibility of bilateral involvement of the SI joint in this infection often leads to delayed diagnosis, prolonged treatment as

spondylarthrosis, and subsequent increased morbidity. Chronic lower back or hip pain should raise the suspicion of TB of the spine, hip, or sacroiliac joint, possibly complicated by a psoas abscess. Our case confirms that the rarity and non-specific clinical manifestation of infectious sacroiliitis usually leads to delayed diagnosis. With a high degree of suspicion, imaging studies, and invasive diagnostic procedures may be necessary.

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