

Postpartum Tuberculous Sacroiliitis

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Abstract

Postpartum inflammatory sacroiliitis is a well known clinical entity, treatment for which is conservative. Pyogenic sacroiliitis also has been reported in literature following caesarian section. We report a rare case of postpartum tuberculous (TB) sacroiliitis, which, to our knowledge, has not been reported in the literature earlier. The patient completely recovered with anti-tuberculous treatment.

Postpartum inflammatory sacroiliitis has been previously reported in literature as a self-limiting condition, usually resolving over a period of 3 months or more.¹ During pregnancy, hormonal changes cause the pelvic joints to relax. Ligaments and capsule of the sacroiliac (SI) joints are susceptible to stretching and even tearing during parturition.² These microscopic tears could lead to synovitis or bleeding into the sacroiliac joint resulting in severe pain.¹

Pyogenic sacroiliitis is a rare condition with incidence rate of 1.5% to 10% of all pyogenic joint infections.³ Septic sacroiliitis is rarely reported during pregnancy and in the postpartum period. Infective foci elsewhere in the body such as the urinary tract could lead to infection of the SI joints. These infections could lead to life threatening septic shock in pregnancy.⁴ Lumbar epidural analgesia has been proposed as a probable portal of bacterial entry in healthy patients undergoing caesarian section.⁵

TB sacroiliitis is an uncommon condition accounting for 3% to 9.7% of all bone and joint TB.⁶ A case of tuberculous sacroiliitis during pregnancy has been previously reported.⁷

The patient provided written informed consent for print and electronic publication of this case report.

Case Report

A 26-year-old woman underwent a lower segment caesarian section and postoperative period was uneventful. Three weeks postoperatively, she had excruciating pain in her right SI joint and severe pain while bearing weight. She was admitted at a hospital. Her laboratory tests revealed elevated erythrocyte sedimentation rate (ESR) of 80 mm/hr and creatine reactive protein (CRP) of 50 mg/L. Magnetic resonance imaging (MRI) scan was suggestive of infective sacroiliitis and she was treated with broad-spectrum antibiotics intravenously and intramus-



Figure 1. MRI scan showing widened right sacroiliac joint with minimal fluid and edema in the iliac and sacral side of sacroiliac joint.

cular analgesics for 1 week. Her condition worsened and she was referred to our center. On clinical examination, she was nonambulatory due to agonizing pain. The right SI joint was warm and tender. Side-to-side compression test, Gaenslen test, and Patrick's and Gilly's tests were positive on right-side. Repeat laboratory tests showed ESR 100 mm/hr, CRP 78 mg/L, total count 12,000 cells/mm³, alkaline phosphatase 142 IU/L. Repeat MRI scan showed a widened right SI joint with minimal fluid, edema in the iliac, and the sacral side of SI joint and in piriformis and obturator internus muscles, suggestive of infective sacroiliitis (**Figure 1**). Technetium-99m methylene diphosphonate (Tc-99m MDP) bone scintigraphy showed intense tracer uptake in right SI joint (**Figure 2**). Single photon emission computed tomography/computed tomography (SPECT/CT) demonstrated a widened right SI joint with increased inflammatory activity (**Figure 3**). As the patient was nonresponsive to broad-spectrum antibiotics, a TB immunoglobulin-M (IgM) antibody test was done, and came back significantly positive. The patient underwent CT-guided aspiration of the right SI joint which was positive for acid-fast bacilli (AFB). AFB culture was negative. She was initiated on oral antituberculous drugs, including rifampicin, isoniazid, ethambutol, and pyrazinamide. She made a dramatic recovery within 2 weeks and was able to walk with significant

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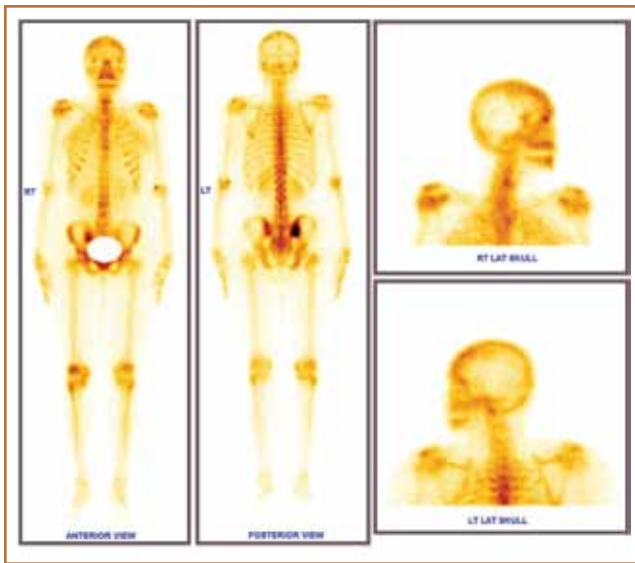


Figure 2. Bone scintigraphy showing intense tracer uptake in right sacroiliac joint.

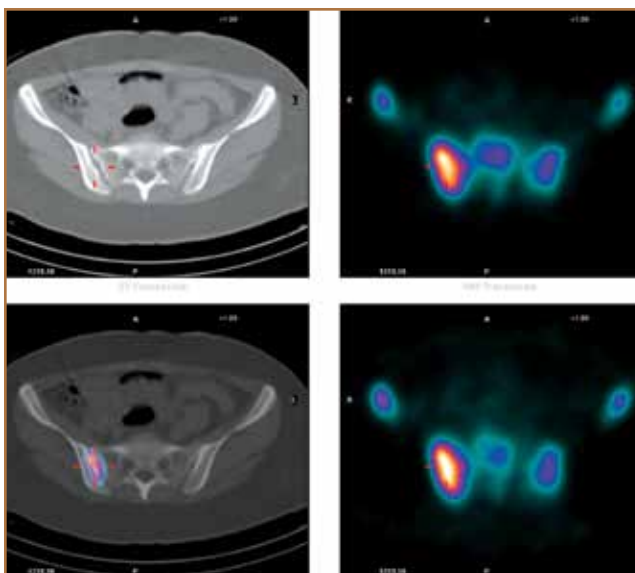


Figure 3. SPECT/CT demonstrating a widened right sacroiliac joint with increased inflammatory activity.

reduction in pain. After 6 months of antituberculous treatment, her walking became normal with occasional right-sided pain. At 1-year, her TB IgM antibody titre was negative.

Discussion

TB of the SI joint in the postpartum period has not been reported earlier in the literature. It is a painful condition which often limits ambulation. Inflammatory parameters such as ESR and CRP are almost always elevated. TB in SI joint is often associated with tuberculous lesions elsewhere, and it commonly originates from a tuberculous psoas muscle abscess or tuberculous spondylitis.⁸

In our patient, active tuberculous infection elsewhere was not detected. Radiographs in the early course of disease may show widening of the joint space. MRI can detect osseous and soft tissue edema. Radioisotope bone scans have a higher specificity and sensitivity than in inflammatory disease, and can be positive 48 to 72 hours after the onset of symptoms.⁹ Serologic diagnosis of TB using enzyme-linked immunosorbent assay kits to measure specific IgA, IgM, and IgG antibodies to specific mycobacterial antigen or mixture of antigens are commercially available. IgM is found to be the initial antibody produced. This feature suggests that the presence of IgM antibody to TB protein antigen might be characteristic of early disease. IgG is also found to be a useful antibody for monitoring the response of antitubercular treatment.¹⁰ Combined use of IgA and IgG tests allows an increased diagnostic accuracy of TB.¹¹ CT-guided aspiration or open biopsy is required to establish the causative organism for medical treatment. As osteoarticular tuberculosis is paucibacillary, AFB culture is most often negative. Although in this patient we could not get a tissue diagnosis, in light of elevated TB IgM antibody, aspirate demonstrated the presence of AFB and clinical improvement with antituberculous drugs and a diagnosis of tuberculous sacroiliitis was made.

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