Postpartum Septic Sacroiliitis Misdiagnosed as Sciatic Neuropathy

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Abstract: Early diagnosis of septic sacroiliitis is difficult because symptoms are nonspecific, especially during pregnancy and the postpartum period. We describe a female patient with left buttock pain radiating down the thigh after an uncomplicated induction delivery. She was afebrile and had no apparent abnormality on pelvic x-ray or computed tomography scan. A sensory deficit in the lateral portion of her left lower limb was found, and electromyography showed neurogenic abnormalities in the left lower limb. She was initially misdiagnosed as sciatic neuropathy. As her symptoms worsened, septic sacroiliitis is considered. Bone scintigraphy showed increased ^{99m}Tc-methylene diphosphonate uptake in the left sacroiliac joint, and magnetic resonance imaging scan showed a signal abnormality in the left sacroiliac joint. The diagnosis of septic sacroiliitis was then confirmed by the rapid efficacy of antibiotic therapy. This report suggests that irritation and injury of spinal nerves can be the presenting signs in septic sacroiliitis.

Key Indexing Terms: Septic sacroiliitis; Magnetic resonance imaging; Sciatic neuropathy. **[Am J Med Sci 2010;339(3):292–295.]**

Septic sacroiliitis is a rare but increasingly prominent disease.[1] It manifests as pain in the lower back or buttock that increases with ambulation and tenderness over the sacroiliac joint, with or without fever.[2] The lack of symptom specificity makes it easy to misdiagnose septic sacroiliitis as nonspecific sacroiliitis, pelvic abscess, or intervertebral disk herniation.[3] Diagnosing septic sacroiliitis during the peripartal period may be a particular challenge because pain in the lower back and buttocks is common and often nonspecific during pregnancy and the postpartum period.[4,5] In this study, we report on a postpartum female patient with septic sacroiliitis who developed left buttock pain radiating down the thigh. She showed a sensory decrease in the lateral part of her left foot and lower limb. In addition, electromyography (EMG) showed neurogenic abnormalities in the left lower limb. The patient was initially misdiagnosed with sciatic neuropathy and was referred to the neurologic ward.

CASE REPORT

A 30-year-old married, biparous woman with unremarkable family and personal history was referred to our department because of a 40-day history of severe pain in the left buttock radiating down the proximal thigh. The patient's pregnancy was uneventful until fetal ascites was found at 36 weeks of gestation. Therefore, the patient underwent an induction delivery. The delivery was normal without the need for instrumentation, evidence of soft tissue trauma or vaginal wall tears, or any other complications. Two days later, she felt severe pain in the left buttock that became aggravated and began to radiate down the left thigh, limiting straight-leg raising and left hip movement. Other physical and gynecologic examinations were unremarkable. She had a normal temperature of 36.8°C, an increased white blood cell (WBC) count of 1.26×10^9/L (Figure 1), and an increased erythrocyte sedimentation rate (ESR) of 72 mm/hr. Her symptoms intensified several days later, and she sought treatment at the district general hospital.

Clinical examination showed that the straight-leg raising test was positive on the left leg; she had decreased pin prick sensation on the left lower limb and foot. She showed a normal temperature and normal laboratory test results, including WBC count, rheumatic factor, antinuclear antibody, human leukocyte antigen-B27, and plasma immunoglobulin, except that ESR (43 mm/hr) and C-reactive protein (CRP) level (29.2 mg/dL) were increased. Plain radiography of the pelvis (Figure 2) showed sclerosis of both iliac bony plates caused by condensing osteitis, which is a common peripartum finding. The computed tomography (CT) scan showed no abnormality of the left sacroiliac joints. However, an magnetic resonance imaging (MRI) scan of the lumbar spine showed an intervertebral disc herniation at L4-L5 and L5-S1 levels. In addition, EMG studies showed decreased amplitude for the compound muscle action potential of the left tibial nerve and decreased sensory nerve action potential amplitude of the left superficial peroneal nerve. Sensory nerve conduction velocities of the left superficial peroneal nerve (31 m/sec) and sural nerve (29 m/sec) were decreased, whereas they were normal on the right (59 and 45 m/sec, respectively); the bilateral motor nerve conduction velocities of the common peroneal nerve and posterior tibial nerve were normal. The sensory symptoms combined with MRI and electroencephalography findings were interpreted as sciatic neuropathy secondary to intervertebral disk herniation, prompting treatment with methylcobalamin, muscle relaxant, methylprednisolone, and nonsteroidal antiinflammatory drugs. Her symptoms soon improved significantly, but 1 day after withdrawal of methylprednisolone, the pain in her left buttock returned. She was then referred to the neurologic department in our hospital.

At admission to our department, physical examination showed a normal temperature of 37°C. She could move slowly with assistance and crutches. She refused to bear weight on the left leg or sit on the left buttock area. Direct palpation of the left buttock and the sacroiliac joint produced severe pain. No local swelling was apparent. Hyperextension of the left hip was extremely painful. Straight-leg raising of both the left and right legs was difficult and produced pain in the left buttock. Laboratory examination showed increased ESR and CRP levels (Figure 1). Other routine tests, including blood culture, WBC count, and immunologic tests, were normal. A plain radiograph

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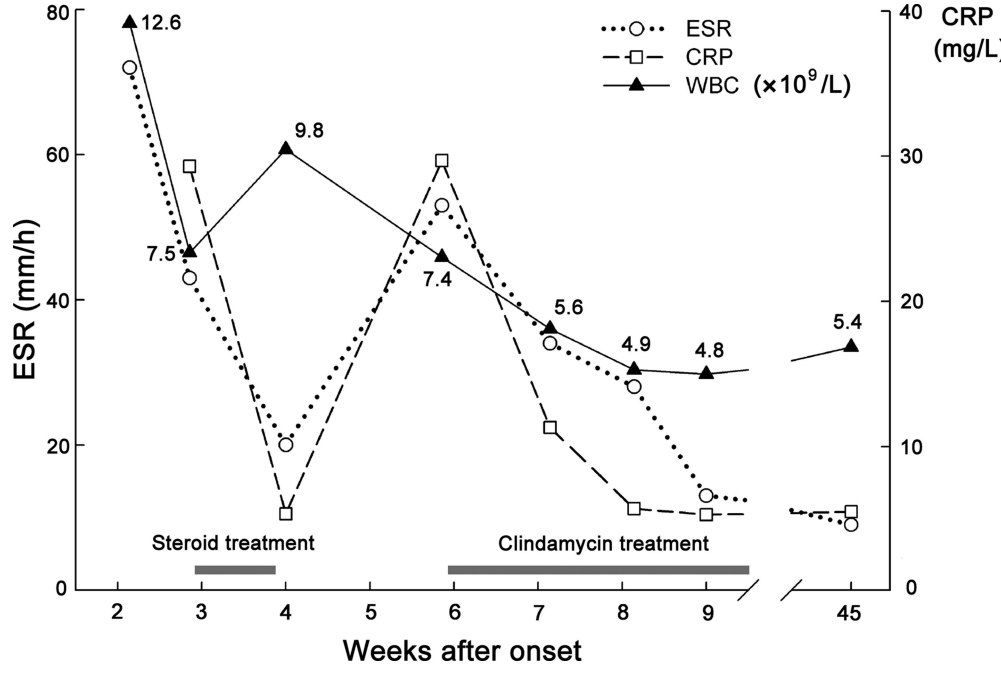

FIGURE 1. Changes in erythrocyte sedimentation rate (ESR) level, C-reactive protein (CRP) level, and white blood cell (WBC) count after symptom onset. After pronounced decreases, ESR and CRP levels increased after steroid treatment and then gradually decreased again after administration of antibiotics. WBC count was transiently increased after symptom onset, increased after steroid treatment, and then gradually decreased while the patient was receiving antibiotics. The 3 tests were all normal at the 8-month follow-up.

and CT scan of the pelvis and showed widening of the left sacroiliac joint space and blurring of the joint margin (Figure 3). Bone scintigraphy showed prominently increased ^{99m}Tc-methylene diphosphonate uptake in the left sacroiliac joint (Figure 4). An MRI of the joint showed bone marrow edema of the left ala of the sacral vertebra (Figure 5). Her history and these findings suggested a diagnosis of left septic sacroiliitis.

Because the patient refused to undergo sacroiliac joint aspiration and had a history of penicillin allergy, an empirical regimen of intravenous clindamycin (0.6 g) was given every 12 hours. On the third day of antibiotic therapy, the severity of the left buttock pain and limitation of the left hip movement

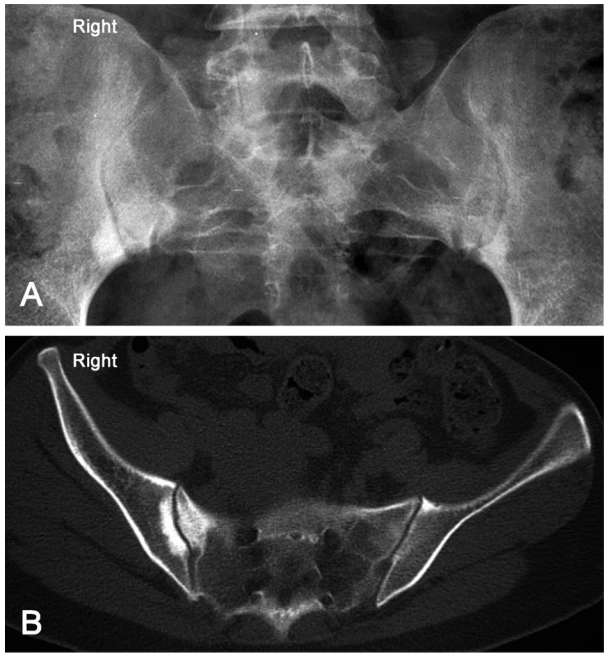

FIGURE 2. Plain radiography (A) and computed tomography scan (B) of both sacroiliac joints taken 16 days after symptom onset. Radiographic survey of the pelvis revealed sclerosis of both iliac bony plates. Both the plain radiography and computed tomography scan showed no blurring or erosion of the joint margins, and the joint spaces were normal.

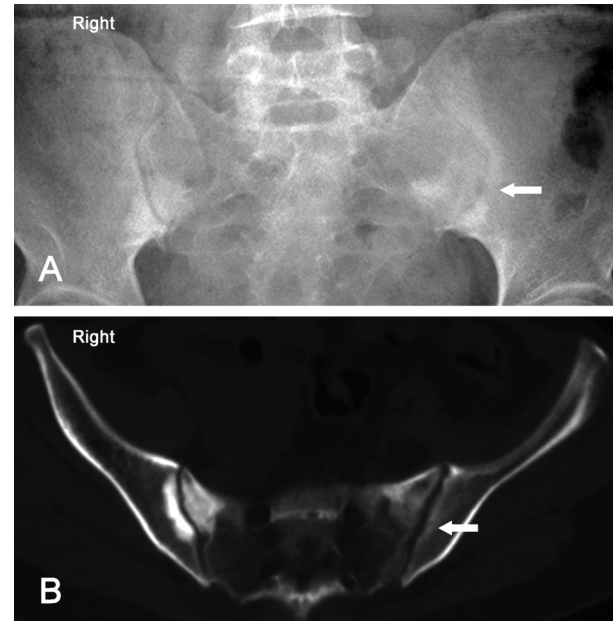

FIGURE 3. Plain radiography (A) and computed tomography scan (B) of both sacroiliac joints taken about 40 days after symptom onset. In both, the joint space of the left sacroiliac joint is slightly widened and the left joint margin is blurred. *White arrow*: left sacroiliac joint.

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