

Late Recurrent *Salmonella* Sacroiliac Osteomyelitis With Psoas Abscess in a Non-Sickle Cell Adult: Case Report

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A review of the literature demonstrates few cases of *Salmonella* sacroiliac osteomyelitis in a non-sickle cell patient and few cases of primary *Salmonella* iliopsoas abscesses.¹⁻⁶ We report the first case involving both entities concurrently in the same non-sickle cell patient.

CASE REPORT

A 36-year-old white woman presented with subjective fever in intermittent episodes over 18 months in addition to worsening left hip, thigh, and buttock pain during the week prior to admission. Review of systems denied any other problems. Personal and family medical histories were negative for sickle cell disease. At age 17, she was diagnosed with left sacroiliac osteomyelitis by computed tomography and gallium scan and was treated empirically with nafcillin. No organism was identified. Current physical examination revealed a febrile, nontoxic-appearing woman. Left lower abdominal quadrant and sacroiliac tenderness were noted. The left hip was painful at the extremes of passive motion.

Laboratory data showed a leukocytosis and an elevated erythrocyte sedimentation rate at 70 mm/hr. Blood cultures were negative. The bone scan demonstrated increased uptake in the region of the left sacroiliac joint similar to uptake noted 19 years earlier on gallium imaging (Figure 1). Further pelvic imaging showed a left iliopsoas abscess with sacroiliac joint involvement (Figure 2).

Diagnostic and therapeutic percutaneous drainage were

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performed. Culture was positive for *Salmonella enterica* serovar Oranienburg. The patient received ceftriaxone administered intravenously for 4 weeks and 6 additional months of sulfamethoxazole/trimethoprim orally. She clinically improved, the abscess resolved radiographically, and the C-reactive protein decreased from 9 mg/dL to 0.9 mg/dL.

DISCUSSION

Salmonella is a non-spore-forming gram-negative enteric bacillus that is pathogenic for human beings and animals. *Salmonella typhi* and *S paratyphi* cause typhoid and paratyphoid fever and are primarily transmitted via the fecal-oral route. Nontyphoidal *Salmonella*, including *S enterica* serovar Oranienburg, generally cause gastroenteritis and are transmitted from animals to human beings via contaminated food or water or fecal-oral contamination.⁷

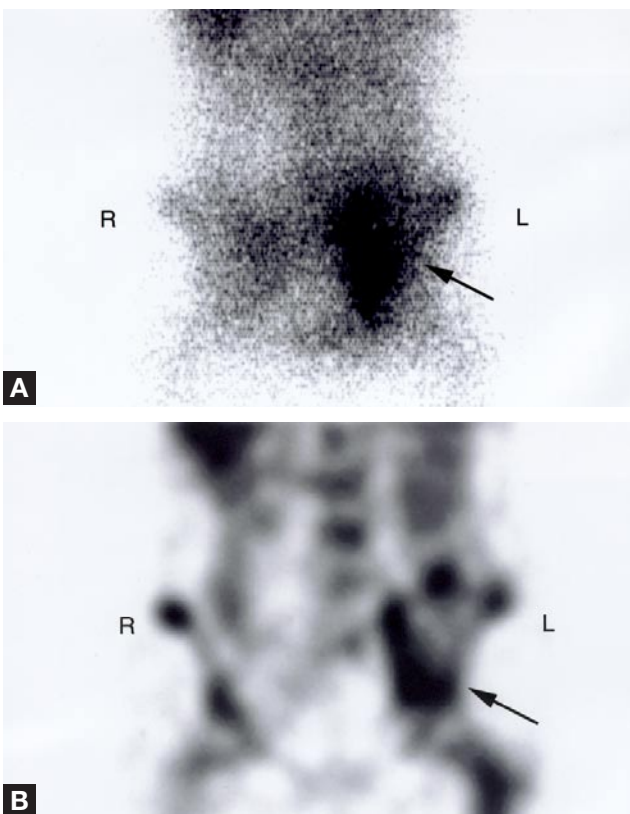


Figure 1. (A, B) Nuclear medicine images performed 19 years apart in same patient, demonstrating recurrent uptake in left iliopsoas/sacroiliac region (arrows).

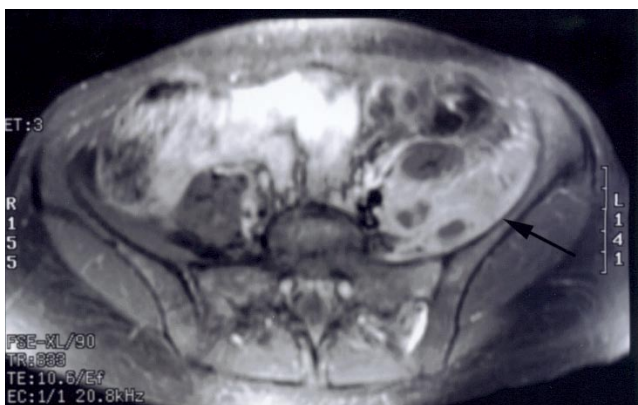


Figure 2. Magnetic resonance imaging (axial view) of pelvis showing multiloculated, iliopsoas abscess (arrow).

Chronic infection can exist in an asymptomatic patient with negative stool cultures and no previous history of gastrointestinal infection. The bacteria remain dormant in the reticuloendothelial system, acting as opportunistic bacteria only when the host defenses are depressed. Reactivation of the disease can produce late recurrent osteomyelitis, as in our patient.^{8,9}

Salmonella is rarely isolated in osteomyelitis and is commonly associated with sickle cell disease. Some authors believe that *Salmonella* may have a predilection for the sacroiliac joint, but only 17 previously reported cases of sacroiliac joint infection could be found in the literature.^{10,11} In adults, the most common predisposing factors for sacroiliitis are intravenous drug use, followed by skin, respiratory, and genitourinary tract infections.

Primary iliopsoas abscess caused by *Salmonella* is rarely

“Reactivation of the disease can produce late recurrent osteomyelitis...”

reported.¹²⁻¹⁷ Usually, a *Salmonella* psoas abscess occurs as a complication of a ruptured mycotic aneurysm of the intra-abdominal aorta or as a consequence of direct extension of an adjacent lumbar spine infection. Typical clinical features are prolonged fever with pain in the lower back, groin, hip, or lower abdomen, and the thigh often is kept in flexion.¹⁸

Overall, the most striking features of our patient’s illness are the lack of symptomatology consistent with a primary *Salmonella* infection in the past, the 19-year dormancy of infection at the same anatomic site, the lack of an immunocompromising condition that might facilitate reactivation of infection, and the lack of predisposing factors for iliopsoas abscess. We believe that our

patient’s initial illness 19 years ago represented a milder infection that was suppressed by oral antibiotics and that her original infection was contracted from contaminated food. In the interim, she maintained a chronic infection that reactivated opportunistically.

Management

Treatment for *Salmonella* sacroiliac joint infection requires a minimum of 4 weeks of parenterally administered antibiotic therapy (eg, third-generation cephalosporin, quinolones, or trimethoprim-sulfamethoxazole) followed by a course of oral antibiotics. The duration varies with clinical and radiographic response. Surgical or image-guided percutaneous catheter drainage plus appropriate antimicrobial therapy are standard treatments for iliopsoas abscess.¹⁹

AUTHORS’ DISCLOSURE STATEMENT AND ACKNOWLEDGMENTS

The authors report no actual or potential conflict of interest in relation to this article.

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This paper will be judged for the Resident Writer’s Award.