Pyogenic Sacroiliitis in Young Children: a Difficult Diagnosis in One Case

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Abstract

Pyogenic sacroiliitis is an uncommon infection often diagnosed too late because of poor localization of symptoms and inadequate physical examination. We describe a case of a 13-year-old girl with initially misdiagnosed pyogenic sacroiliitis. This case highlights the importance of thorough physical examination and considering septic arthritis in an unusual joint.

Key words: Sacroiliitis, children, misdiagnosis, infection

Introduction

Bone and joint infections are a significant cause of morbidity in infants and young children. Although many principles regarding the pathogenesis, diagnosis, and treatment of infection have remained constant over the years, other aspects of this important pediatric illness are changing [1].

Pyogenic sacroiliitis is an uncommon infection often diagnosed too late because of poor localization of symptoms and inadequate physical examination. The most common pathogens are Staphylococcus aureus (80%) and beta-hemolytic Streptococcus. The least frequent are Kingella kingae, Hemophilus influenzae, Escherichia coli (E. coli) and Salmonella [2-6]. Infection related to brucellosis and tuberculosis may also occur in endemic areas [7].

We report on a 13-year-old girl with initially misdiagnosed pyogenic sacroiliitis. E. coli was found responsible for the infection.
Case report

A 13-year-old girl without significant medical history was admitted to the rheumatology department of our hospital for left hip pain that was debilitating. She presented 2 months previously with sudden-onset inflammatory pain of the left hip, with lameness and fever (temperature 39 °C). She had complained of throat pain and had received oral ibuprofen and was treated for 3 weeks in a local healthcare setting with a corticosteroid (betamethasone, 2 mg/day) and amoxicillin (1 g/day for the throat pain), without resolution. The diagnosis was acute rheumatic fever beginning with hip pain. With the worsening of the pain and lameness, she was seen in the rheumatology department for better care. She also complained of frequent episodes of yellowish vaginal discharge, which disappeared after antibiotic therapy.

Physical examination revealed a general good condition. Her temperature on admission was 39.4°C, weight 41 kg and height 1.41 m. Her hips were flexible, but rotational movements triggered severe pain of the left buttock. Palpation of the left buttock was painful. The Lager’s sign, Gaenslen test and the thigh thrust test produced left buttock pain.

Radiography of the pelvis revealed no abnormalities. Results of CT of the pelvis suggested sacroiliitis in the left sacroiliac joint (Figures 1 and 2). MRI and bone scan are not available in our country.

Laboratory tests showed leukocytosis, 20000/mm³, with 87% neutrophils; erythrocyte sedimentation rate (ESR) 75 mm in the first hour, and C-reactive protein (CRP) level 96 mg/l. With a vaginal swab, E. coli was isolated. The diagnosis of pyogenic sacroiliitis was made.

The patient received intravenous ceftriaxone and ciprofloxacin for 15 days and then oral ciprofloxacin for 2 months. The outcome was favourable. By 72 hr after treatment, general signs had subsided completely, and the pain and lameness disappeared after 2 weeks. At the 3-month follow-up, the patient had no complaints.

Discussion

Symptoms related to the sacroiliac joint can be difficult to diagnose because of its anatomical features, especially in the growing child. Pyogenic sacroiliitis involves 1% to 4% of patients and occurs most frequently in sacroiliac joints of children and young adults [8]. The clinical features combine unilateral buttock pain, fever and lameness. Sometimes the clinical presentation may be atypical, thus leading to misdiagnosis [2]. This occurred with our patient, whose first clinical presentation suggested hip disease.

The pain may be increased with hip load, movement and time of day (nighttime inflammatory pain). Clinical examination is essential. The flexion, abduction, external rotation (FABER) test can give diagnostic clues. Other tests may also cause pain: Gaenslen test, lateral-compression pelvic posterior shear test, the test of anterior opening of the sacroiliac joint, and the compression test of the sacrum [2,3,9]. In our case, tests revealed left sacroiliac pain, which discounted hip disease.

Radiography and CT usually provide little evidence. Diagnosis is based on MRI. Bone scintigraphy (99m-Tc-MDP) is sensitive but not specific [2,3]. Scintigraphy and MRI results may be negative [8]. Ultrasonography findings are often
initially negative [2]. Radiography of the sacroiliac joint of our patient was difficult and CT suggested the left sacroiliac joint aspect.

CRP level and ESR are sensitive but not specific. Leukocyte number may be increased or within the normal range [2]. Blood culture should be performed before antibiotics are given, but their efficiency is low [8, 10]. Only patients not responding quickly to antibiotics should be biopsied. The etiological diagnosis usually requires local action (puncture of the sacroiliac joint for gluteal abscess) to isolate the causative organism. However, puncture is difficult [8]. In our patient, we did not puncture the joint, but the organism was identified by vaginal swab.

The treatment is based on double-guided antibiotic. The recommended treatment must be intravenous and then followed by oral administration (after normalization of both symptoms and biology) for a total of 4 to 6 weeks [3]. If the organism is identified, antibiotic therapy is adjusted. In our patient, the organism E. coli was resistant to bectalactamin and aminoglycosides. Surgery is indicated only with abscess [8, 10]. The outcome is usually favorable, with complete recovery without clinical sequelae.

Conclusions
The diagnosis of sacroiliac disease is difficult in children, despite modern imaging, and requires careful clinical examination. Our case is original in that sacroiliitis was mistaken for hip disease because of the unusual presentation.

Conflict of interest statement
The authors declare that they have no conflict of interest in relation to this article.

Ethical approval was obtained for this work.

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References