Vague Hip Pain in a 9-Year Old Soccer Player

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CASE PRESENTATION

HISTORY

9-year-old male presented to a primary care sports physician office complaining of right hip pain with antalgic gait. Onset of the symptoms was 2 weeks after URI. He denies any specific inciting injury or trauma but said the day after soccer practice, he woke up with pain in right hip that radiated around the side of his hip. He described the pain as sharp with moderate severity. Pain was aggravated with running and standing. Patient tried NSAID with minimal relief. Parents gave him rest from sports for one week and restarted activity but he had severe pain in groin when walking.

PHYSICAL EXAMINATION

BP 90/60 | Ht 1.473 m (4'10") | Wt 40.2 kg (88 lb 9.6 oz) | Temp 98.6°
General: awake, alert, and oriented. Uncomfortable
Skin: no rashes, lesions, or lacerations
Vascular: good popliteal pulses, skin warm and dry
Neuro: no weakness in the L4-S1 nerve distribution
Musculoskeletal: right hip exam
Inspection: no observable abnormalities. Antalgic gait.
Palpation: no tenderness to palpation
ROM: hip flexion and extension was moderately limited with significant pain. Signification pain with internal rotation and with external rotation. Not able assess strength due to pain.
Special tests: positive FADIR and positive FABER test

TESTS AND RESULTS

Initial Blood Tests: WBC 7.5, Plt 290. ESR 38. Lyme Ab negative

XR: AP/LAT of the right hip/pelvis resulted normal

Repeat Blood Tests (1 week later): WBC 9.2, Plt 363. CRP 12.1 ESR 50. Blood culture negative

MRI: Bone marrow edema in the acetabulum suggests stress reaction versus infection. There is reactive edema in the adjacent obturator internus muscle. Prominent right hip joint effusion

DIFFERENTIAL DIAGNOSIS

1. Transient Synovitis
2. Adductor Strain
3. Legg-Calves Perth-Disease
4. Septic Arthritis
5. Malignancy

FINAL DIAGNOSIS

Osteomyelitis of right hip acetabulum

OUTCOME

Patient was admitted to a children's hospital with the diagnosis of osteomyelitis. He underwent emergent aspiration, irrigation and debridement surgery. He was started on IV Clindamycin and Linezolid. Cultures from the aspiration results were delayed due to lab errors. The final bacteria culture remained unknown. He was discharged from the hospital with a PICC line to complete a total course of 7 weeks with IV Clindamycin and Linezolid. Antibiotic effectiveness was followed with serial CRP, which trended down to normal at the end of the antibiotic course.

Return to Play: He was placed on limited weight bearing over the next 1–2 weeks. He was transitioned to full weight bearing as tolerated. Patient was referred to PT/OT. He was gradually advanced to return to play. He is now able to fully participate in sports after 12 weeks from initial visit.

DISCUSSION

Approximately 1% of inpatient hospitalizations in children are from osteomyelitis. There are 3 categories of osteomyelitis:
1. Acute hematogenous osteomyelitis.
2. Non-hematogenous osteomyelitis.
3. Chronic osteomyelitis.
Acute hematogenous osteomyelitis (AHO) is the most common form of osteomyelitis in children, which is mostly likely this case. It results from hematogenous deposition of bacteria within bone following symptomatic or asymptomatic bacteremia. Staphylococcus aureus, Streptococcus pneumoniae and Haemophilus influenza type B are most common bacteria. In hematogenous osteomyelitis, 85% of cases are due to S aureus. Nonhematogenous osteomyelitis occurs with direct contamination of bone from trauma, surgery, or spread of infection from an adjacent soft tissue infection. The earliest sign of osteomyelitis seen on x-ray is swelling of surrounding tissues follow by periosteal reaction however this is not often evident until 1–2 weeks after onset of infection.

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