



The Critical Role of Accurate Diagnosis: A Case Report of Osteonecrosis of the Femoral Head Initially Misdiagnosed as Piriformis Syndrome

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Background

Osteonecrosis of the femoral head is a disease that causes progressive hip joint damage, most commonly affecting individuals in their 30s to 50s. Risk factors include corticosteroid use, alcohol, trauma, and coagulation disorders. MRI is essential for assessing lesion size, a key predictor of disease progression. Surgical treatment depends on disease severity, with preservation techniques used in early stages and arthroplasty preferred for collapsed femoral heads. This case report presents the diagnostic process of osteonecrosis of the femoral head in a young male patient with hip pain, emphasizing the importance of accurate diagnosis.

Case Description

A 36-year-old male reported left hip pain persisting for two months, described as a persistent, aching sensation with intermittent numbness, exacerbated by walking, stair climbing, and prolonged sitting position. One month earlier, he had visited an orthopedic clinic, where Both Hips AP & Lat & Three Quarter X-ray and L-spine AP & Lat X-ray showed no abnormalities, leading to a suspected diagnosis of piriformis syndrome. Despite initial treatment with medication, including NSAIDs, stretching, and massage, symptoms persisted over time, leading to further assessment in rehabilitation medicine. The FAIR test for diagnosing piriformis syndrome, showed a positive result, along with mild tenderness in the buttock, though lumbar pathology was excluded, and hip sonography showed no significant abnormalities in the piriformis muscle or sciatic nerve. A trigger point injection with 1% lidocaine was administered at the identified tender point. The patient was prescribed NSAIDs, analgesics, and physical modalities for pain management over two weeks, along with recommendations for short-term rest and targeted piriformis stretching and strengthening exercises. At his two-week follow-up, the patient reported initial improvement after treatment, but his pain recurred on the day of the visit. Upon entering the clinic, he showed a limping gait due to left-sided pain. A hip MRI was performed and revealing bilateral femoral head osteonecrosis, with subchondral collapse and loss of sphericity in the anterior aspect of the left femoral head, as well as joint effusion and synovitis, left. The patient, a 36-year-old male, had no history of trauma or corticosteroid use and no underlying coagulation disorders, hemoglobinopathies, or autoimmune diseases except for hypertension. However, he had a history of chronic excessive alcohol consumption, drinking four to five bottles of soju weekly for over ten years. His height was 180cm, and his weight was 112kg. He was advised to abstain from alcohol and referred back to orthopedics, where he was diagnosed with avascular necrosis (Ficat and Arlet classification: right hip grade I, left hip grade III). Surgical intervention was recommended if further disease progression occurred.



Figure 1. Both hips AP, left oblique (1, 2), and left lateral X-ray images taken during the initial orthopedic evaluation

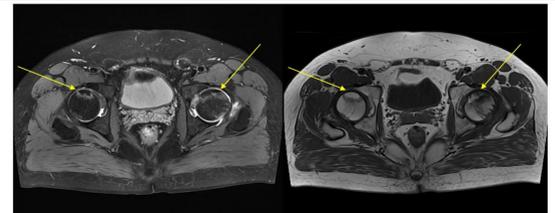
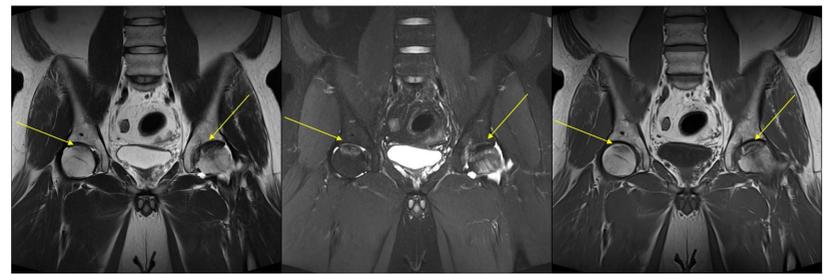


Figure 2. Hip magnetic resonance imaging (MRI) scans, coronal view (top row) and axial view (bottom row)



Figure 3. Both hips AP, right oblique (1, 2) and left oblique (1, 2), and right and left lateral X-ray images obtained after referral to orthopedics following the diagnosis of osteonecrosis

Conclusion

This case demonstrates the necessity of a comprehensive diagnostic approach in young patients with persistent hip pain, even when initial imaging shows no abnormalities. Although initially managed as piriformis syndrome, the patient's worsening symptoms led to an MRI-confirmed diagnosis of avascular necrosis. The identification of excessive alcohol consumption as a major risk factor emphasizes the importance of lifestyle modifications in disease management. Early recognition and intervention can help preserve joint integrity and delay the need for surgical treatment.