

CAM You See It? Adult Langerhans Cell Histiocytosis and Cam Pathology: A Case Report

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Introduction

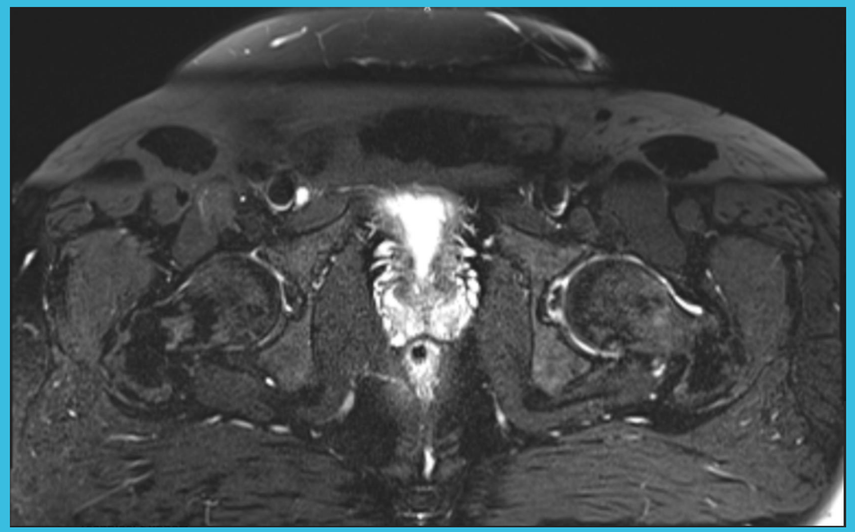
Langerhans cell histiocytosis (LCH) is a rare disorder characterized by clonal proliferation of antigen-presenting Langerhans cells. While primarily pediatric, adult LCH occurs in 1–2 cases per million and commonly presents with localized bone pain [1]. Bone lesions can involve the skull (51%) and long tubular bones like the femur (~17% of cases) [2]. Diagnosis requires biopsy showing characteristic Langerhans cells positive for CD1a, CD207, and S100 [3]. Management ranges from observation to systemic therapy [4].

All patient protected health information has been de-identified. As the case report is devoid of patient identifiable information, it is exempt from IRB review requirements as per NuHealth policy.

Case Presentation

A 50-year-old man with a history of adult LCH involving the bilateral hips, lungs, and ribs presented with an 8-month history of progressive left hip pain (rated 8/10) with left leg weakness. His history was significant for right hip debridement and completion of zoledronic acid therapy in 2022. The pain disrupted sleep and was exacerbated by prolonged walking, turning, and standing transitions. Prior conservative treatments, including bilateral hip physical therapy, pain management evaluation, and oral cyclobenzaprine, provided minimal relief. PET/CT in March 2026 showed no active metabolic lesions. Physical examination demonstrated tenderness over the left anterior superior iliac spine and quadriceps with painful, limited hip range of motion. Log roll, FABER, and FADIR tests were positive on the left. Left hip flexion strength was 3/5, and knee extension/ankle strength was 4/5. Left hip radiographs showed moderate degenerative arthrosis without lytic lesions. MRI revealed Cam-type femoroacetabular impingement (FAI) morphology with superimposed arthrosis and labral tearing. On July 2, 2026, a lidocaine trigger point injection to the left tensor fasciae latae yielded significant symptomatic relief.

MRI of Left Hip Revealing Cam Type FAI Morphology



Langerhans cell histiocytosis can create an inflammatory environment leading to Cam morphology

Discussion

Distinguishing active metabolic recurrence from secondary structural sequelae is a key challenge in managing osseous LCH. While PET/CT confirmed no active LCH lesions, MRI identified Cam-type FAI. Chronic inflammation is increasingly recognized as a key driver of Cam morphology [5]. Local cytokine activity during prior LCH involvement likely created an inflammatory microenvironment that accelerated secondary Cam morphology and labral strain. Recognizing mechanical impingement and myofascial compensation allowed prioritization of targeted conservative measures over invasive options.

References

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