Hip Pseudogout: A Rare and Unexpected Diagnosis

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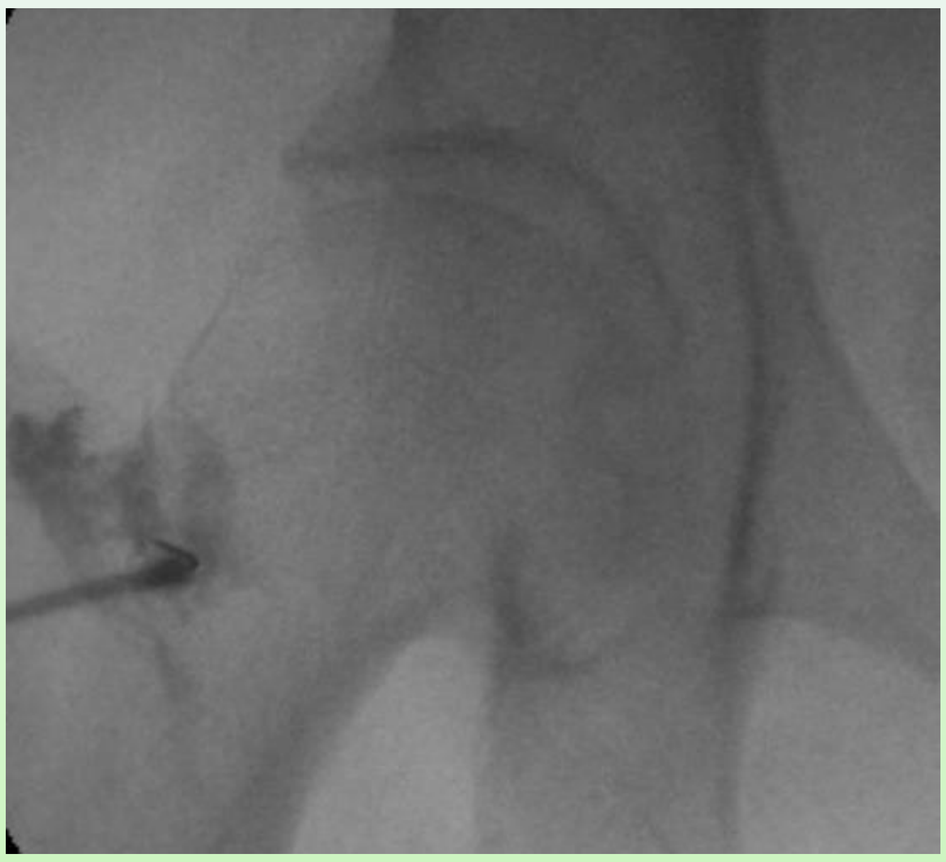
BACKGROUND

70 year old female with history of ongoing right groin pain after fluoroscopic therapeutic right hip injection. Noncontrast MRI following the procedure demonstrated nonspecific bone marrow edema and joint effusion of the affected hip. The patient denied redness, swelling, or stiffness, however an early septic joint could not be excluded. Subsequent aspiration of the hip demonstrated calcium pyrophosphate dihydrate fluid crystals compatible with pseudogout. The patient's pain persisted, described as worse in the morning and waning throughout the day, but did improve overall with oral NSAID.



Fluoroscopic spot image of the right hip during therapeutic right hip injection demonstrates intraarticular contrast and appropriate needle placement.

IMAGING

Noncontrast MRI of the right hip demonstrated a right hip joint effusion, which was likely secondary to therapeutic injective into right hip capsule performed approximately 2 weeks prior. Patchy bone marrow edema was seen throughout the superolateral aspect of the femoral head and neck with some involvement of the acetabular rim. No fracture, dislocation, cortical destruction, or evidence of avascular necrosis was present.

DISCUSSION

Pseudogout occurs secondary to deposition of calcium pyrophosphate dihydrate (CPP) in connective tissue. CPP is made from the binding of pyrophosphate with calcium, which can then deposit in joints. Deposition within synovial fluid can occasionally lead to synovitis, characterized by adjacent inflammatory changes. Pseudogout can be associated with conditions such as hyperparathyroidism, hypomagnesemia, joint trauma, and hemochromatosis. Typically, acute episodes of pseudogout resolve in a little over a week, but can occasionally lead to joint damage that mimics degenerative arthritis. Clinical manifestations of pseudogout are highly variable, however monoarticular involvement is rare, although occasionally it can be provoked by trauma or medical illness. Monoarticular pseudogout when diagnosed is typically seen in the knee, but can uncommonly involve the wrist or ankle. Monoarticular hip involvement is exceedingly rare.

Coronal MRI STIR sequence: Hyperintensity along the right femoral head. Incidental pelvic lesion also noted.

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