

Visual Diagnosis in Emergency Medicine

RAPIDLY DESTRUCTIVE OSTEOARTHRITIS: THE CASE OF THE MISSING FEMORAL HEAD

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CASE REPORT

An 80-year-old woman presented to the Emergency Department (ED) complaining of atraumatic hip pain and difficulty ambulating. The patient had longstanding pain issues; x-ray studies performed 6 weeks prior to her ED visit demonstrated circumferential joint space narrowing (Figure 1). She had received an intraarticular hip injection of triamcinolone 5 weeks prior, to temporize for total hip arthroplasty, but developed worsening pain after brief improvement in symptoms. On examination she was afebrile, with pain on range of motion of her

left hip, but normal strength, sensation, and distal pulses. Laboratory evaluation was negative for leukocytosis; c-reactive protein was not elevated.

DIAGNOSIS: RAPID DESTRUCTIVE OSTEOARTHRITIS

The patient's x-ray study revealed destructive arthropathy with absent femoral head, concerning for rapid destructive osteoarthritis (RDO) (Figure 2). Orthopedic Surgery was consulted; she was discharged with analgesics and assistive devices for ambulation. She

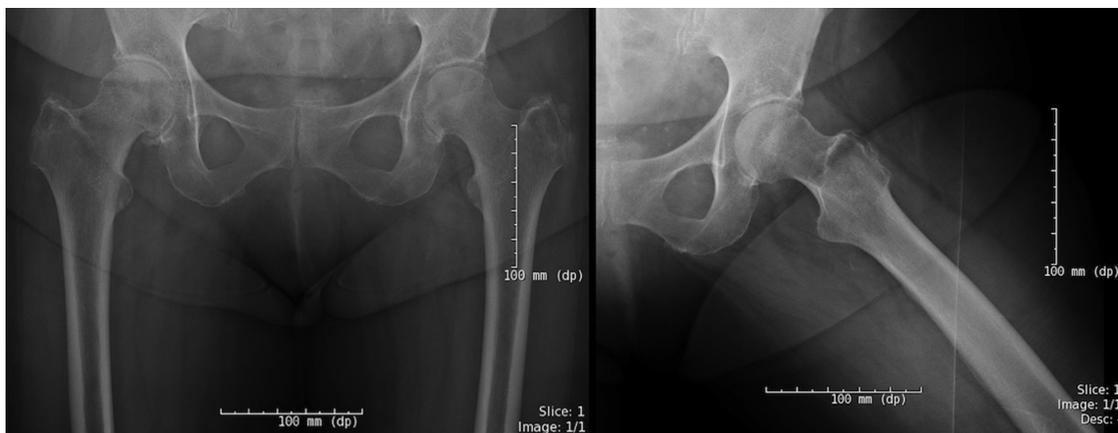


Figure 1. Anteroposterior pelvis and lateral x-ray studies of the left hip 1 week prior to steroid injection (6 weeks prior to emergency department visit).

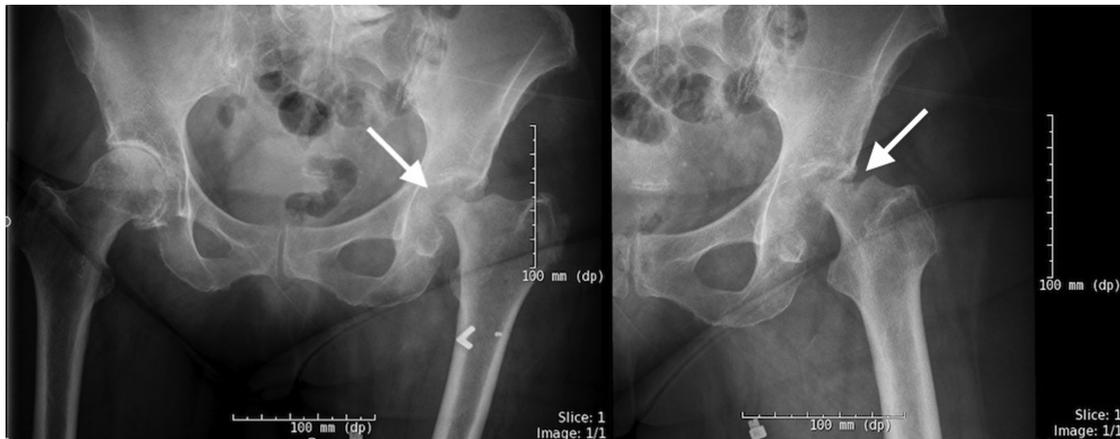


Figure 2. Anteroposterior pelvis and lateral x-ray studies of the left hip during emergency department showing destructive arthropathy of the left hip (5 weeks after hip injection).

underwent scheduled hip replacement with subsequent resolution of pain.

DISCUSSION

RDO is an uncommon destructive arthropathy. Nontraumatic cases occur most commonly in elderly women, and radiologic findings of severe unilateral hip destruction occur within 2–16 months. The pathogenesis of RDO is not well understood, and several risk factors have been theorized (1–3). Although long-term systemic glucocorticoid use is a known cause of osteonecrosis, the association between intraarticular injections and RDO remains controversial (1). Although primarily described only in case reports, one retrospective study by Hess et al. of 109 patients who underwent intraarticular steroid injections found that 21% had radiographic findings consistent with RDO within 1 year of injection (3–8). Though rare, the diagnosis should be considered in patients complaining of acutely worsening hip pain after intraarticular injection, and repeat imaging is indicated (1,6).

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