

AMSER Case of the Month

July 2022

62 yo male with chronic groin pain

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Patient Presentation

- **HPI:** 62 yo male presents to clinic with 2-week history of pubic symphysis and adductor pain. Pt reports chills and lower abdominal pain following colonoscopy 2 weeks prior, improved with dose of ciprofloxacin
- **PMHx:** lumbar radiculopathy, congenital absence of kidney w/ recurrent nephrolithiasis x4, HTN, PE in 2016
- **Physical exam:** Adductor longus tendon tender to palpation BL, tender with stretching and contracting L>R. Full hip passive ROM. Negative straight leg raise R and L
- **Labs:** CRP: 0.4 mg/dL, ESR: 30 mm/hr

What Imaging Should We Order?


Select the applicable ACR Appropriateness Criteria

Variant 1:		Chronic hip pain. First test.	
Radiologic Procedure	Rating	Comments	RRL*
X-ray pelvis	9	X-ray pelvis and x-ray hip are complementary.	☢☢
X-ray hip	9	X-ray pelvis and x-ray hip are complementary.	☢☢☢
MRI hip without IV contrast	1		○
MRI hip without and with IV contrast	1		○
US hip	1		○
CT hip without IV contrast	1		☢☢☢
CT hip with IV contrast	1		☢☢☢
CT hip without and with IV contrast	1		☢☢☢
CT arthrography hip	1		☢☢☢
MR arthrography hip	1		○
Bone scan hip	1		☢☢☢
F-18 fluoride PET hip	1		☢☢☢
Image-guided anesthetic +/- corticosteroid injection hip joint or surrounding structures	1		Varies

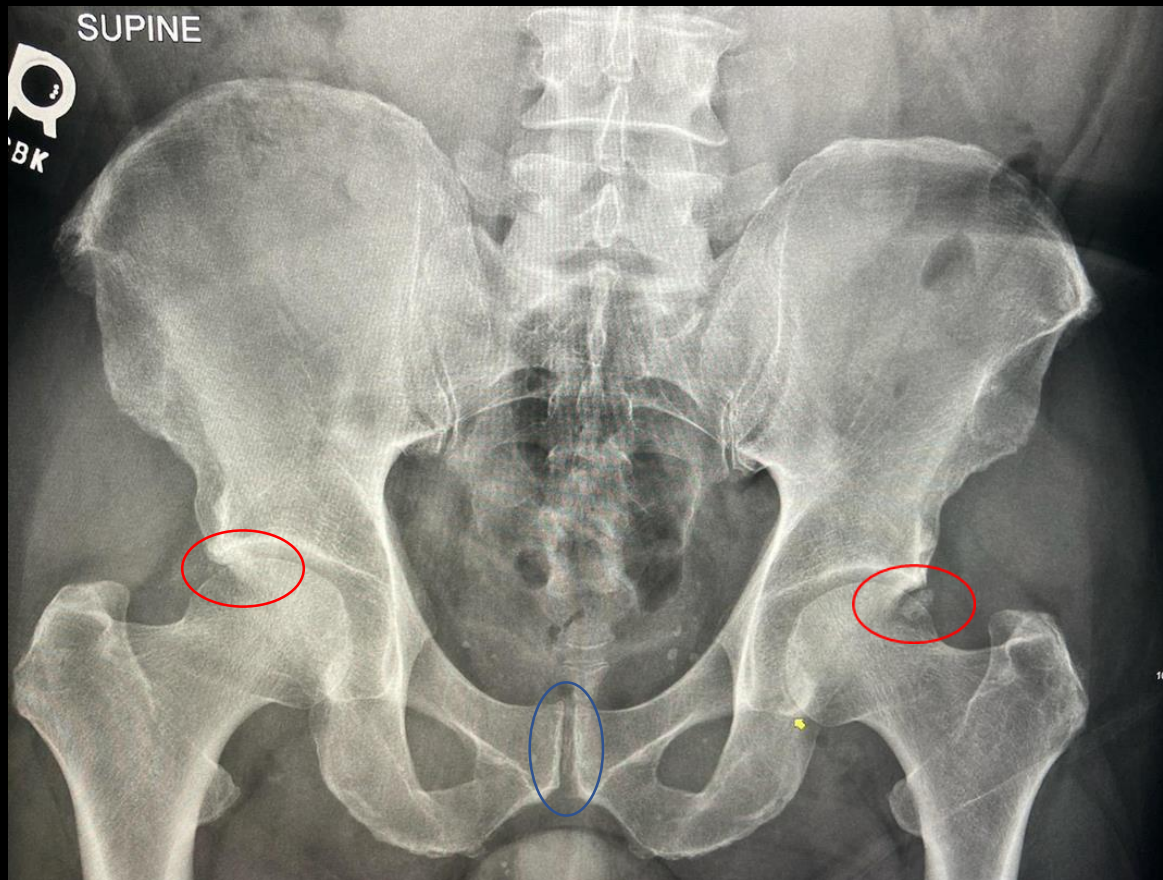
Rating Scale: 1,2,3 Usually not appropriate; 4,5,6 May be appropriate; 7,8,9 Usually appropriate

***Relative Radiation Level**

This imaging modality was ordered by the physician



Findings: (labeled)



Mild osteoarthritic changes of bilateral hips

Mild degenerative changes of symphysis pubis w/o displaced fractured (blue circle)

Osteophytosis of acetabulum (red circles)

Patient Presentation F/u

- Pt diagnose with presumed adductor tendonitis in setting of ciprofloxacin use.
 - Sent home with instructions to limit activity, minimal NSAID use given solitary kidney.
- Pt returns to clinic 6 weeks later with ongoing pain. States pain was improving with rest but returned following resumption of activities.
 - Walking 4-5 miles, riding bicycle
- Physical exam
 - Tenderness at bilateral medial adductor insertion
- **What imaging should we order now?**

Select the applicable ACR Appropriateness Criteria

Variant 2: Chronic hip pain. Radiographs negative, equivocal, or nondiagnostic. Suspect extra-articular noninfectious soft-tissue abnormality, such as tendonitis.

Radiologic Procedure	Rating	Comments	RRL*
MRI hip without IV contrast	9		○
US hip	7		○
Image-guided anesthetic +/- corticosteroid injection hip joint or surrounding structures	5		Varies
MRI hip without and with IV contrast	3		○
MR arthrography hip	2		○
CT hip without IV contrast	1		☢☢☢
CT hip with IV contrast	1		☢☢☢
CT hip without and with IV contrast	1		☢☢☢
CT arthrography hip	1		☢☢☢
Bone scan hip	1		☢☢☢
F-18 fluoride PET hip	1		☢☢☢

This imaging modality was ordered by the physician

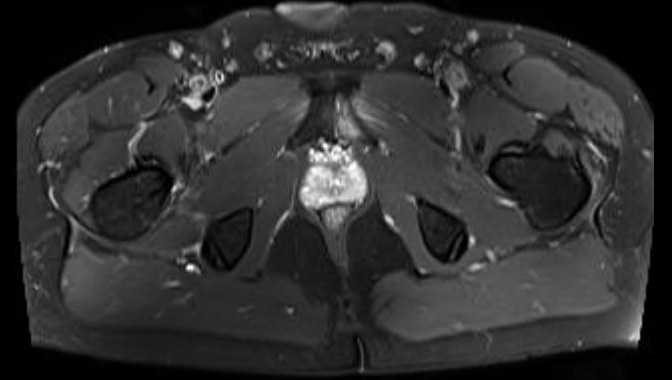
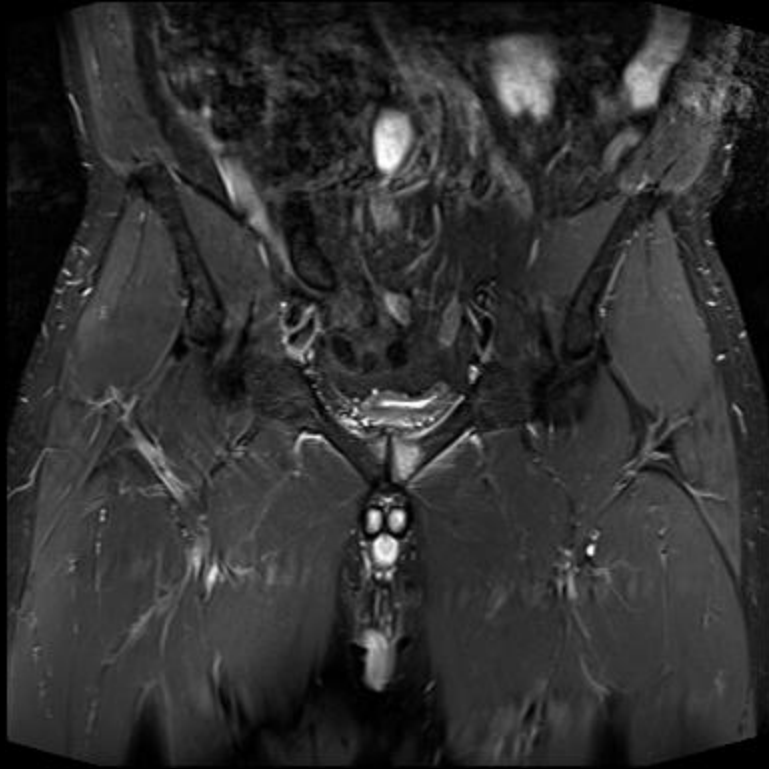


Rating Scale: 1,2,3 Usually not appropriate; 4,5,6 May be appropriate; 7,8,9 Usually appropriate

*Relative Radiation Level



Findings (unlabeled)



MRI Pelvis wo contrast

Findings (labeled)



Bilateral parasymphyseal bone marrow edema L>R, c/w advanced stress reaction (red circle)
Curvilinear line along inferior margin of L pubic bone c/w stress fracture (red arrow)
Intact gracilis tendon insertion (blue arrow)

Final Dx:

Athletic Pubalgia / Osteitis Pubis

Case Discussion

- **Epidemiology**

- Most common in athletes, with prevalence of 0.5% - 8%. higher in distance runners, soccer players. Associated with OA, pregnancy, pelvic surgery

- **Pathophysiology**

- Repetitive use, chronic muscle imbalance with symphyseal instability causes bone stress reaction and degeneration of hyaline cartilage.

- **Symptoms**

- Gradual onset pelvic pain, worse with activity, no systemic symptoms
 - May have acute onset if associated with pelvic pain

- **Treatment**

- Conservative (NSAIDS, physical therapy), medical (steroid injections), and Surgical (resection of degenerative areas)

References:

- Dirkx M, Vitale C. Osteitis Pubis. [Updated 2021 Dec 15]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK556168/>
- Holt MA, Keene JS, Graf BK, Helwig DC. Treatment of osteitis pubis in athletes. Results of corticosteroid injections. *Am J Sports Med.* 1995 Sep-Oct;23(5):601-6. doi: 10.1177/036354659502300515. PMID: 8526278.
- Johnson R. Osteitis pubis. *Curr Sports Med Rep.* 2003 Apr;2(2):98-102. doi: 10.1249/00149619-200304000-00009. PMID: 12831666.
- Mehin R, Meek R, O'Brien P, Blachut P. Surgery for osteitis pubis. *Can J Surg.* 2006 Jun;49(3):170-6. PMID: 16749977; PMCID: PMC3207605.
- Wiley JJ. Traumatic osteitis pubis: the gracilis syndrome. *Am J Sports Med.* 1983 Sep-Oct;11(5):360-63. doi: 10.1177/036354658301100516. PMID: 6638254.