

# AMSER Case of the Month

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### Hip Pain

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# Patient Presentation

66 y.o. M with past medical history of ACS, CVA, HTN, presents for evaluation of worsening right hip pain.

What Imaging Should We Order?

# ACR Appropriateness Criteria

**Variant 1: Chronic hip pain. Initial Imaging.**

Procedure	Appropriateness Category	Relative Radiation Level
Radiography pelvis	Usually Appropriate	☼☼
Radiography hip	Usually Appropriate	☼☼☼
US hip	Usually Not Appropriate	○
Image-guided anesthetic +/- corticosteroid injection hip joint or surrounding structures	Usually Not Appropriate	Varies
MR arthrography hip	Usually Not Appropriate	○
MRI hip without and with IV contrast	Usually Not Appropriate	○
MRI hip without IV contrast	Usually Not Appropriate	○
Bone scan hip	Usually Not Appropriate	☼☼☼
CT arthrography hip	Usually Not Appropriate	☼☼☼
CT hip with IV contrast	Usually Not Appropriate	☼☼☼
CT hip without and with IV contrast	Usually Not Appropriate	☼☼☼
CT hip without IV contrast	Usually Not Appropriate	☼☼☼
Fluoride PET/CT skull base to mid-thigh	Usually Not Appropriate	☼☼☼

← These imaging modalities were obtained for the patient

# Frontal Hip, Frog Lateral, Frontal Pelvis Views (unlabeled)



# Findings (labeled):

- Enlargement, flattening, and deformation of right femoral head
- Severe right hip joint space narrowing and subchondral sclerosis
- Increased valgus angulation of right hip



Final Dx:

Coxa Magna secondary to Legg-Calve Perthes Disease

# Coxa Magna:

- Defined as >10% asymmetry in femoral head size with circumferential enlargement
- Causes limb length discrepancy and proximal displacement of greater and lesser trochanters
- Occurs secondary to injury of femoral head or epiphysis
  - • Legg-Calve-Perthes disease
    - Slipped capital femoral epiphysis
    - Developmental dysplasia of hip



# Legg-Calve-Perthes Disease:

- Necrosis and repair of femoral capital epiphyseal ossification center
- Secondary changes and hyperactive growth may lead to coxa magna
- Structures affected include articular cartilage, femoral head, physeal cartilage, and acetabulum
- Causes predisposition to degenerative arthritis

# Patient Case Discussion

Coxa Magna is diagnosed based on radiographic findings:

- Remote history of Legg-Calve-Perthes disease in this patient
- Coxa magna is a major residual effect of patients with LCPD
- Severity of coxa magna correlates with long-term outcome of hip function and integrity
- Superimposed osteoarthritis observed as well

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