A Case of Multifocal Osteonecrosis and Acquired Immunodeficiency Syndrome

T.A. Sparks and J.E. Adams

**LEARNING OBJECTIVES**
1. Recognize risk factors for developing osteonecrosis in patients with HIV
2. Diagnose osteonecrosis in patients with HIV

**CASE**
47 yo male with AIDS, Hep C, ITP and EtOH abuse p/w b/l hip and low back pain. Exam was significant for decreased range of motion of his rt hip. Imaging revealed b/l osteonecrosis of his femoral heads. Treatment consisted of arthroplasty of his rt hip and conservative management of his lt hip. Six months after surgery the patient presented with rt shoulder pain and x-ray demonstrated osteonecrosis. Prior to evaluation by orthopedics, the patient returned to his PCP complaining of l shoulder pain, and osteonecrosis was again noted on x-ray. The patient was diagnosed with multifocal osteonecrosis of the hips and shoulders.

**CLINICAL PRESENTATION**
- More common in males (Age 20-50)
- Common locations include femoral heads, humeral heads, femoral condyles, and scaphoid and lunate bones
- Insidious onset
- Presents with mild to moderate periarticular pain
- Worse with weight bearing and movement of limb
- Typically, normal physical exam, but may have point tenderness or decreased range of motion of limb

**DIAGNOSIS**
- First step- X-ray (sensitivity 40%)
- If X-ray is non-diagnostic and high suspicion → MRI (sensitivity > 90%)
- If MRI is non-diagnostic and high suspicion → bone scan
- MRI for staging

**MECHANISM**

**INTERUPTION IN BLOOD SUPPLY**

1. Ischemia
2. Hyperemia
3. Increased Interosseous Pressure
4. Death of bone tissue (Osteocytes)

**Risk Factors for Osteonecrosis in Patients with HIV**
- Hypercoaguable States
- Alcohol Abuse
- Inflammatory States (Pancreatitis)
- Hyperlipidemia
- Systemic Corticosteroids
- Osteopenia/Osteoporosis
- Tobacco Abuse
- Antiretroviral Therapy

**REFERENCES**