

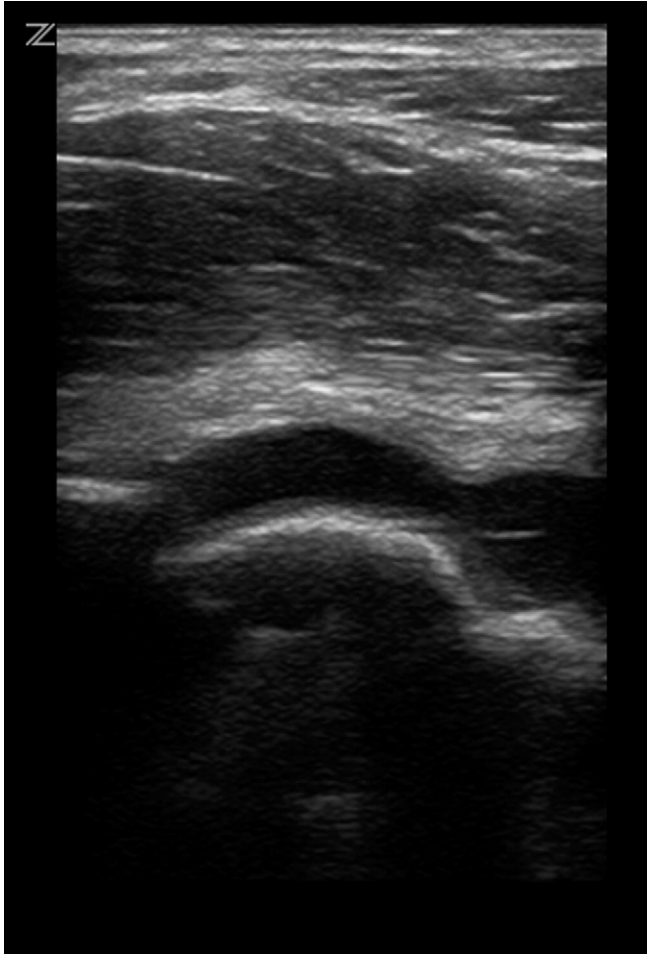
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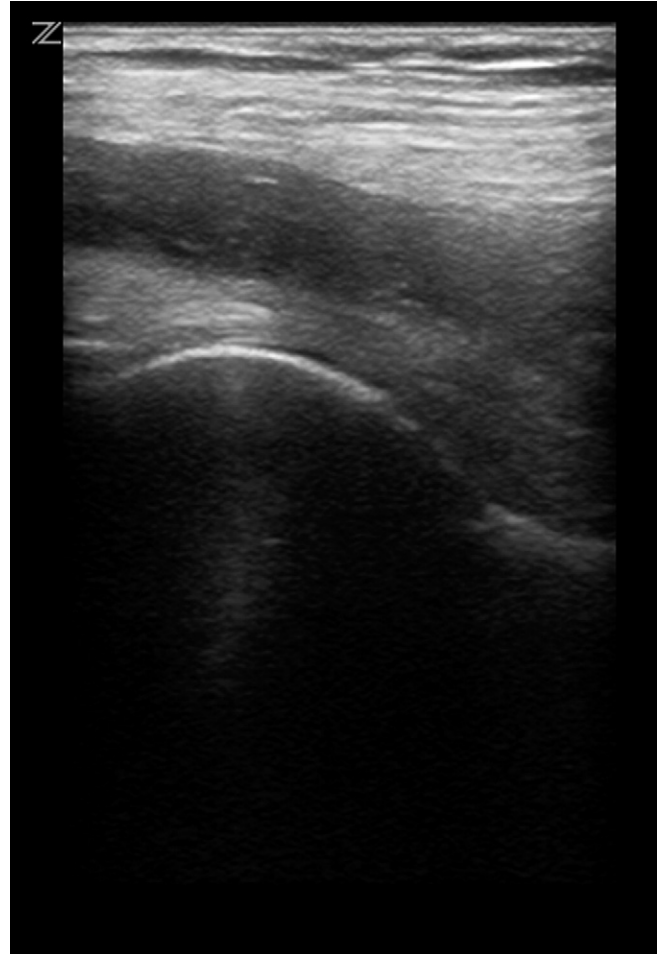
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**Figure 1.** Abnormal left hip with joint effusion.



**Figure 2.** Normal right hip. Used with permission of Joshua C. Reynolds, MD, Department of Emergency Medicine, University of Maryland, Baltimore, MD.

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A 32-year-old woman with mitral valve prolapse presented to our emergency department with 24 hours of worsening left hip pain exacerbated by movement and weight bearing. She had no other systemic, infectious, or rheumatologic symptoms. Physical examination revealed no local signs of inflammation, but pain was reproducible with passive range of motion. Movement of her other joints did not cause pain. The plasma WBC count was 9,600/mL<sup>3</sup>, with 87% neutrophils, and the C-reactive protein concentration was 1.5 mg/dL.

*For the diagnosis and teaching points, see page e19.*

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## IMAGES IN EMERGENCY MEDICINE

*(continued from p. e18)***DIAGNOSIS:**

*Septic arthritis.* Pelvic and hip radiograph results were normal. Bedside ultrasonography identified a left hip effusion (Figure 1). Synovial aspiration yielded turbid fluid without crystals and a WBC count of 98,000/mL<sup>3</sup> (99% neutrophils). An orthopedic surgeon performed arthrotomy and operative washout. The effusion recurred during the postoperative period, so the patient was taken back to the operating room 3 days later for repeated arthrotomy. She was transferred to another facility on hospital day 4 for long-term intravenous administration of antibiotics.

The emergency physician can diagnose hip effusion with bedside ultrasonography, using the following technique: With the patient supine and the hip in internal rotation and slight flexion, position a linear probe on the anterior surface, across the joint in a sagittal plane. An effusion will appear as a hypoechoic (dark) layer adjacent to the femoral cortex.<sup>1</sup> The uninvolved opposite joint can provide a normal comparison (Figure 2). Once a joint effusion is identified, an arthrocentesis can be performed with real-time ultrasonographic guidance.

**REFERENCE**

1. Lee FM, Fox JC. Diagnosis of hip effusion with bedside ultrasound in the emergency department. *West J Emerg Med.* 2003;4:51-54.