

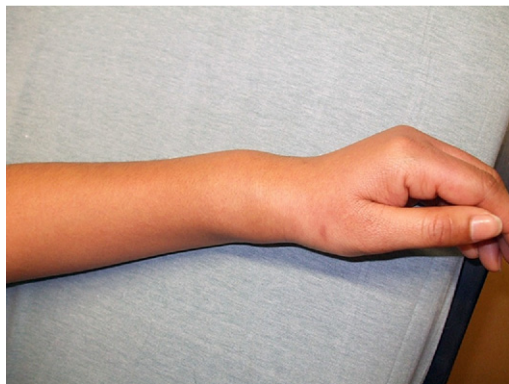
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**Figure 1.** Patient's left wrist at presentation.



**Figure 3.** Standard lateral radiographic image of the patient's wrist.



**Figure 2.** Standard anterior-posterior radiographic image of the patient's wrist.



**Figure 4.** MRI of the patient's wrist. Used with permission of George L. Higgins, III, MD, Department of Emergency Medicine, Maine Medical Center, Portland, ME.

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A 30-year-old woman presented to the emergency department, complaining of left wrist pain. She reported that she had fractured the same wrist in the distant past. Recently, she had observed swelling with associated discomfort over the dorsal aspect of her wrist. She denied noticing erythema or experiencing fever. Physical examination revealed obvious swelling of the left wrist without evidence of cellulitis (Figure 1). Radiographs demonstrated a large cystic lesion involving the distal radius (Figures 2 and 3). Follow-up magnetic resonance imaging (MRI) was obtained (Figure 4).

*For the diagnosis and teaching points, see page 581.*

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## IMAGES IN EMERGENCY MEDICINE

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### DIAGNOSIS:

*Aneurysmal bone cyst.* Aneurysmal bone cysts are benign tumors containing vascular elements. These cysts are primarily found in people aged 20 years or younger, with a higher prevalence in female patients, and may become aggressive.<sup>1-3</sup> Long bones are typically involved, most commonly the humerus, femur, and tibia.<sup>2</sup> Patients present with weeks to months of pain and swelling in the affected extremity.<sup>3</sup> Radiographically, an aneurysmal bone cyst demonstrates a fusiform “blowout” lesion located eccentrically relative to the long axis of the bone.<sup>1</sup> Diagnosis can be confirmed with computed tomographic imaging and MRI. However, definitive diagnosis may require a bone biopsy.<sup>1,2</sup>

Treatment for aneurysmal bone cysts is predominantly curettage with bone grafting.<sup>2</sup> Some patients may require marginal or wide excision.<sup>1</sup> Despite these interventions, recurrence rates can approach 40%.<sup>2</sup> When aneurysmal bone cysts are diagnosed, more worrisome conditions such as giant cell tumor, hemangioma, chondroblastoma, osteoblastoma, and osteosarcoma must be considered. Therefore, it is important for the emergency physician to arrange patient follow-up with an orthopedic oncologist for further evaluation.

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