



# POSNA

## The Core Curriculum

### **Subacute osteomyelitis**

#### **Objectives**

1. Define subacute osteomyelitis
2. Describe presenting symptoms of subacute osteomyelitis in children
3. Discuss the natural history and differential diagnosis of subacute osteomyelitis in children
4. Describe pathologic features of subacute osteomyelitis in children
5. Describe a treatment plan for subacute osteomyelitis in children

#### **Discussion point**

1. When is biopsy indicated for subacute osteomyelitis, and how would you do it?

#### **Discussion**

Subacute osteomyelitis is not rare, a series of 44 cases over 12 years was collected at a single children's hospital. It undoubtedly results from an alteration of the host-disease interaction, with a more subdued reaction than seen in acute osteomyelitis; in subacute osteomyelitis, the bone is essentially capable of controlling the infection, but not of eradicating it. Symptoms are of longer duration (> 2 weeks), milder, of pain and discomfort around the affected area. Soft tissue swelling is unusual. Constitutional symptoms are absent, there is often a history of recent antibiotic usage. The radiographic appearance is variable, from a well-circumscribed, walled lesion (Brodie's abscess) to a more aggressive appearance simulation neoplasm. Subacute osteomyelitis may be epiphyseal, metaphyseal, or diaphyseal. Subacute osteomyelitis may cross the physis, permanent growth arrest is, however, rare. A classification system modified from Gledhills' has been published by Dormans. Aspiration at a minimum is necessary to attempt to retrieve an organism, although about half the time, none is retrieved. Staphylococcus is the most commonly identified organism. Most cases of subacute osteomyelitis resolve with antibiotics only; so if the diagnosis can be made with assurance radiographically, no intervention other than aspiration is needed. Aggressive lesions do require biopsy for diagnosis, if a malignancy is being entertained in the differential diagnosis, the biopsy must be done with full consideration of the treatment plan if a malignancy is diagnosed. Excision of the lesion is probably curative on its own, but antibiotics have been recommended in addition to surgery when surgery is performed. The dosage, duration, and mode of administration of antibiotic therapy does not have any scientific basis; we do know what has been effective from the reported experience with subacute osteomyelitis.

#### **References**

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