What Is Your Diagnosis?

Figure 1—Craniocaudal (left) and lateral (right) radiographs of the left carpus and distal portion of the radius of a 4-year-old horse with swelling proximal to the carpus and a grade 3 of 4 lameness.

History

A 4-year-old Appaloosa mare was evaluated for a grade 3 of 4 lameness in the left forelimb. Signs of pain could be elicited on deep palpation of the carpal area; however, there was no swelling and the carpus appeared normal radiographically. The lameness responded to nonsteroidal anti-inflammatory drugs and stall confinement initially, but became worse one month after the initial evaluation. Reevaluation at that time revealed a return to a grade-3 lameness and a warm, firm swelling over the carpus and the distal portion of the antebrachium. Radiographs of the left carpus and distal portion of the radius were obtained (Fig 1).

Make your diagnosis from Figure 1—then turn the page ▸

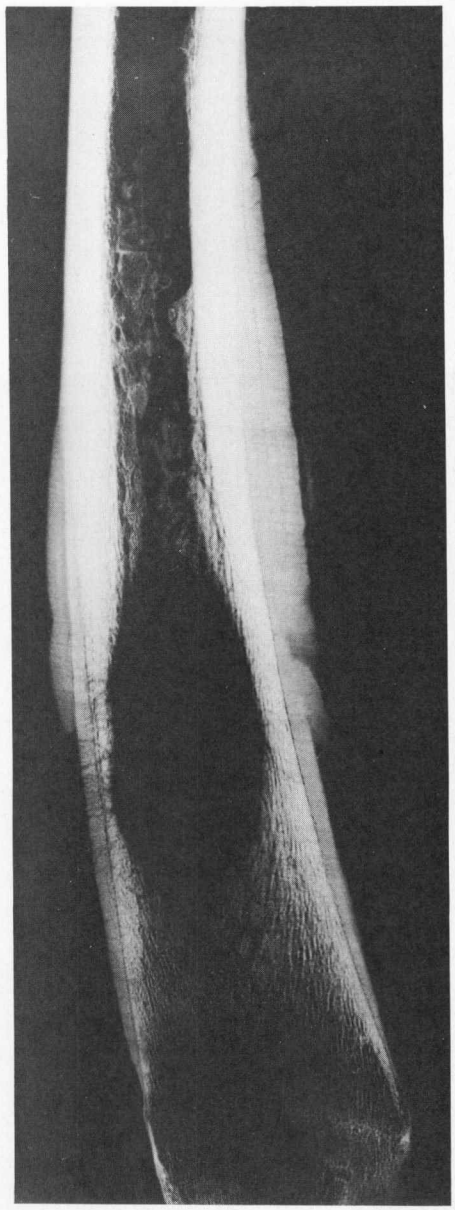

Figure 2—Lateral radiograph of a thin-section of the distal portion of the left radius of the horse in Figure 1.

Here Is the Diagnosis

Radiologic diagnosis—Geographic bone destruction and periosteal reaction in the distal metaphyseal portion of the radius. There is an apparent sclerotic margin around the destructive area, suggesting additional endosteal bone production. The margin is well demarcated.

Comments—The radiographic changes were consistent with osteomyelitis or monostotic fibrous dysplasia with secondary periostitis. Separation of new periosteal bone and cortex in the palmar border of the destructive focus were indicative of a developing sequestrum.

At the owner's request, further testing was not done. The horse was given trimethoprim-sulfamethoxazole (30 mg/kg of body weight, IV, q 24 h) for 30 days. The horse's condition continued to deteriorate, and the horse was euthanatized 10 weeks after the onset of lameness.

At necropsy, the bone was sectioned through the lytic lesion and then radiographed again. Geographic bone destruction and smooth multilayered periosteal reaction were evident (Fig 2). Multiple radiolucent channels were located in the dorsal aspect of the new periosteal bone, suggesting the beginning of drainage tract formation. Endosteal bone production was evident proximal to the destructive focus.

Grossly, the area of bone lysis was filled with a tan friable exudate. The margins of this abscess were formed by reactive bony proliferation, and a similar proliferation was seen on the periosteal surface. Histologically, the space was filled with inflammatory cells and protein exudate.

Septic arthritis and osteomyelitis of hematogenous origin are common in neonatal foals, but rare in adult horses. The recommended treatment regimen includes administration of appropriate antibiotics and surgical debridement or drainage. The prognosis generally is regarded as poor.

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