What Is Your Diagnosis?

History

A 10-year-old spayed female Persian cat was referred for evaluation of a mass in the area of the left elbow joint that had been steadily increasing in size for more than 2.5 months without inducing lameness or signs of pain. The cat's vaccination status was adequate, and there was no history of travel outside New York state. Seven months before referral, the cat had been treated successfully for hyperthyroidism with radiiodine. Diagnostic evaluation prior to referral included radiographic examination of the left thoracic limb, which revealed signs of osteoarthritis. A viscous fluid was obtained during fine-needle aspiration of the mass. Physical examination of the cat at the time of referral revealed a 4-cm, multilobular, smooth, firm mass over the cranial aspect of the left elbow joint. The skin covering the mass was freely moveable, but the mass adhered to the underlying tissues. Signs of pain were not elicited during examination. Results of a CBC and serum biochemical analyses were within reference ranges. Radiographs of the left elbow joint were obtained (Figure 1).

Determine whether additional imaging studies are required, or make your diagnosis from Figure 1—then turn the page →

Figure 1—Lateral radiographic view of the left elbow joint of a 10-year-old spayed female Persian cat evaluated for a mass of 2.5 months' duration.
Radiographic Findings and Interpretation

At the cranio-medial aspect of the elbow joint, there is a large (approx 3-cm diameter) juxta-articular soft tissue mass. In the humeral condyle, there are a few radiolucent areas. At the cranial aspect of the elbow joint, there is a triangular, periarticular, mineralized body. At the medial aspect of the elbow joint, there is mild periarticular new bone formation (severe osteoarthritis). The lucent lesions in the humerus (arrowheads) on the dorsoventral view that could be associated with the mass or with osteoarthritis (Figure 2).

Comments

Excisional biopsy of the left elbow joint mass was performed. Histologic evaluation of the biopsy specimen revealed low-grade synovial cell sarcoma. The cat was returned 6 weeks later for amputation of the left thoracic limb. Physical examination revealed recurrence of the soft tissue mass on the medial and lateral aspects of the left thoracic limb and removal of the left axillary lymph node revealed recurrent synovial cell sarcoma. Also notice a triangular periarticular mineralized body at the cranial aspect of the joint (arrow), suggestive of osteoarthritis. On the dorsoventral radiographic view (B), mild periarticular new bone formation is apparent on the medial aspect of the elbow joint (arrows), which is also compatible with osteoarthritis. Notice lucent lesions in the humerus (arrowheads) on the dorsoventral view that could be associated with the mass or with osteoarthritis.