

what's the take-home?
INSIGHTS FROM CLINICAL CASES . PRESENTATION

Forelimb Lameness in a 2-Year-Old Labrador Retriever

Brian S. Beale, DVM, Gulf Coast Veterinary Specialists, Houston, Texas

A 2-year-old Labrador retriever was presented with a history of lameness of the left forelimb.

History. The owner noticed the lameness 6 months before presentation. It was more severe in the morning and after running, and clinical signs seemed to be progressing slowly. Treatment with rest and aspirin had not been successful in resolving the problem.

Examination. Left forelimb weight-bearing lameness was observed. Full flexion and extension of the elbow evoked a painful response. Mild distention of the joint capsule of the left elbow joint was found with palpation, and mild atrophy of the shoulder muscles was evident. The left elbow was also mildly painful on manipulation, but there was no swelling. Physical examination was otherwise unremarkable.

Laboratory Results. The results of blood work and synovial fluid analysis were within normal limits.

Radiographs. Periarticular osteophytes were noted on radiographic examination of both elbows (Figure 1).



Osteoarthritis of the left elbow associated with fragmented medial coronoid process. Periarticular osteophytes (white arrows) are present at the cranial margin of the radial head, medial humeral epicondyle, and anconeal process. Subchondral sclerosis and periarticular osteophytes (black arrow) are also evident at the trochlear notch of the ulna.

ASK YOURSELF . . .

Which of the following is the optimal therapeutic plan?

- A. Administer a combination of cephalexin and prednisone orally.
- B. Recommend cage confinement for 8 weeks, followed by physical therapy for 8 weeks.
- C. Inject an intraarticular glycosaminoglycan (e.g., Adequan—Luitpold Pharmaceuticals, Shirley, NY).
- D. Surgically explore the elbows and administer a nonsteroidal antiinflammatory drug (NSAID) and a glucosamine chondroitin sulfate supplement.
- E. Inject an intraarticular glucocorticoid.

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DISCUSSION

Correct Answer: D

Fragmented medial coronoid process (FCP) is a common finding in dogs with elbow dysplasia. This condition is frequently bilateral and is common in Labrador retrievers, golden retrievers, rottweilers, German shepherds, and other sporting breeds. Osteoarthritis of the medial humeral condyle, medial coronoid process, and trochlear notch was noted on arthroscopic examination of this patient (Figure 2). Osteochondral fragments were removed from both elbows arthroscopically (Figure 3).

Osteoarthritis is an expected sequela of elbow dysplasia. This disorder probably results from subtle incongruence of the joint surfaces and release of inflammatory and degradative enzymes from the synovium and damaged articular cartilage.

4-Pronged Treatment

This patient responded well to arthroscopic fragment removal, abrasion arthroplasty, deracoxib treatment (Deramaxx—Novartis Animal Health, Greensboro, NC), and administration of a combination of glucosamine, low-molecular-weight chondroitin sulfate and manganese ascorbate (Cosequin—Nutramax Laboratories Inc., Edgewood, MD). FCP should be treated as soon as possible following diagnosis to minimize osteoarthritis. Arthroscopic treatment



Osteoarthritis of the left elbow and fragmented medial coronoid process. Full-thickness and partial-thickness erosion of the articular cartilage of the medial humeral condyle (A) and medial coronoid process (B) is apparent. Note the dislodged osteochondral fragment (C) adjacent to the areas of cartilage erosion.

allows fragment removal and thorough evaluation of the joint surfaces with minimum morbidity. Fragment removal eliminates one possible source of pain and progressive osteoarthritis. Patients walk with minimal signs of forelimb lameness, even after bilateral surgery. Traditional surgical arthrotomy can also be used to remove the osteochondral fragment but is associated with higher morbidity and decreased visibility.

Aggressive treatment of osteoarthritis in its early stages is recommended in the hopes of slowing progression. Postoperative administration of NSAIDs for 3 to 4 weeks may be helpful because prolonged synovitis tends to occur with this condition. Long-term therapy with an NSAID



Arthroscopic removal of the osteochondral fragment associated with the medial coronoid process.

may be needed in this patient because of the preexisting osteoarthritis. NSAIDs are used to suppress such mediators of osteoarthritis as prostaglandin, thereby reducing pain and synovitis.

COX-2 Selectiveness

Osteoarthritic patients benefit from cyclooxygenase-2 selective (COX-2) NSAIDs that spare cyclooxygenase-1 (COX-1). This class of NSAIDs has been shown to be efficacious in treatment of osteoarthritic patients, with a reduced incidence of side effects. Glucosamine and chondroitin sulfate administration is most effective in mild and moderate osteoarthritic joints and should be considered as an adjunctive long-term therapy to provide needed nutrients for chondrocytes and to suppress degradative enzymes. ■

See Aids & Resources, back page, for references, further reading, and contacts.

TAKE-HOME MESSAGES

Early aggressive treatment of osteoarthritis is recommended in the hopes of slowing progression.

Treatment includes removal of predisposing causes; NSAID administration; and supplementation with appropriate nutraceuticals or other slow-acting, disease-modifying agents.