

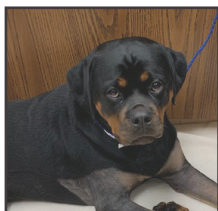
Case Study

Coco: 6-month-old female intact Rottweiler



The Trouble with Elbows

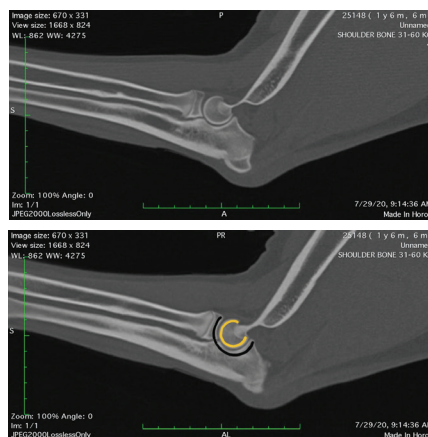
Andrea Clark, DVM, DACVS-SA



Coco is a 6-month-old female intact Rottweiler who was referred by her primary care veterinarian for further evaluation of right thoracic limb lameness. The lameness started 3 weeks prior to presentation, and there was no history of trauma or any other inciting cause. Radiographs had been performed, and showed concern for possible osteochondritis dissecans of the right shoulder. Coco was treated with activity restriction/rest and analgesic medication, but there was no improvement in her lameness. Coco was referred to VCA Hollywood Animal Hospital's Surgical Service for further evaluation.

On examination, Coco was partial weight bearing lame on her right thoracic limb at a walk and trot. She displayed repeated pain on extension of both the left and right elbow joints. She had no shoulder pain, and normal range of motion of her shoulder joints. A CT scan was recommended to further evaluate Coco's elbows

and shoulders, and to identify the underlying cause of the lameness and pain. Images of Right Humeralradial Joint A CT scan of Coco's thoracic limbs revealed bilateral medial coronoid process disease, along with right-sided humeralradial incongruity. Her shoulders were within normal limits. Medial coronoid process disease is a term used to encompass several pathologies, including sclerosis, microfracture, fragmentation, fissuring, and cartilage damage to the medial coronoid process. Elbow joint incongruity is another type of developmental elbow pathology, and it can occur alone or in combination with medial coronoid process disease. Image:(left) L MCP Sclerotic with irregular cyst-like structure in radial incisure Image: (right) R MCP Sclerotic blunted & irregular radial incisure. In fact, elbow joint incongruity is seen in 60% of elbows with medial coronoid process disease. Medial coronoid process disease is initiated by a delay in endochondral ossification, as well as biomechanical forces that act on the medial coronoid process during maturation. Disturbance of endochondral ossification could result from unbalanced mechanical factors and suprphysiological loading of the medial coronoid process. Overloading of the medial compartment of the elbow may also result from joint incongruity. This leads to a progressive process of cleft formation, fracture, bone remodeling, fatigue of subchondral bone, and eventual medial coronoid process disease.



Images of Right Humeralradial Joint

Medial coronoid process disease most commonly affects young, large and giant breed dogs. Rottweilers, Labrador Retrievers, and German Shepherd Dogs have a breed predisposition for medial coronoid process disease. The age at first presentation is usually between 6 and 18 months of age. Elbow joint incongruity is also primarily seen in large breed dogs, and Rottweilers are over-represented. Treatment of medial coronoid process disease includes both surgical and non-surgical treatment options. For affected animals, the best prognosis is associated with early surgical treatment in young dogs with minimal to mild osteoarthritis

in conjunction with preventative measures against osteoarthritis.

Coco is an example of an ideal surgical candidate due to her young age, and the fact that the CT scan showed minimal degenerative changes.

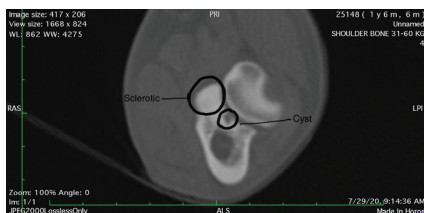


Image:(left) L MCP Sclerotic with irregular cyst-like structure in radial incisure

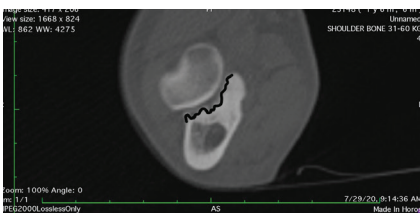


Image: (right) R MCP Sclerotic blunted & irregular radial incisure

The Trouble with Elbows (...continued)

Traditionally, surgery for these cases was approached via an open arthrotomy. At VCA Hollywood Animal Hospital, arthroscopy is available as one of our minimally invasive treatment options. Arthroscopy has been shown to result in a shorter period of convalescence and better functional outcome compared to arthrotomy. Additionally, arthroscopy allows for superior visualization of intra-articular structures. Improved visualization allows the surgeon to treat each joint more thoroughly and more precisely.

Since it is minimally invasive, patients tolerate arthroscopic treatment of both elbow joints in a single session. Plus, elbow arthroscopy can often be performed concurrently with ovariohysterectomy or castration and/or stem cell harvesting. Bilateral elbow arthroscopy was performed during a single session and revealed fissuring of both the left and right medial coronoid processes, along with synovitis. Arthroscopy revealed fissuring of both the left and right medial coronoid processes, along with synovitis. Arthroscopic debridement of the diseased medial coronoid process was performed with a power burr until healthy subchondral bone was reached. Debridement of diseased cartilage not only removes the inciting cause of pain/lameness, but it also helps slow the progression of osteoarthritis. Debridement to the level of healthy subchondral bone supplies a means of vascular access to the joint.

Coco was hospitalized for one night post-operatively, and she was discharged to her owners the following day. At the time of discharge, Coco was comfortable and already ambulating with minimal lameness at the time of discharge. Besides cases like Coco's of medial coronoid process disease, elbow arthroscopy can be performed for diseases including ununited anconeal process, osteochondrosis, and incomplete ossification of the humeral condyle. This minimally invasive surgical option provides superior visualization and outcome for treatment of certain disease conditions, as well as, less patient morbidity.

Our Surgical Service is available 6 Days a Week! Dr. Clark's is available Wed-Sat. She can be reached through our Dedicated Referral Line at 954-616-9835. This line is only provided to area veterinarians and veterinary staff for their sole use. A doctor is always in at VCA Hollywood Animal Hospital. As an Emergency & Referral practice, we rely on the strong relationship we have with our community veterinarians. Patients referred by veterinarians will receive services related to the presenting problem only. Clients are required to return to their regular veterinarian for all other work. We value our relationship with you and look forward to our continued collaboration. Please call us at 954-616-9835 with any questions, to refer a patient or request a consultation.



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