

Medial Compartment Disease is the most common cause of forelimb lameness in young medium to large breed dogs. Medial Compartment disease is a term that encompasses the components of elbow dysplasia that affect the medial aspect of the joint. These include:

- ✚ Medial Coronoid Disease
- ✚ OCD of the Humeral Condyle
- ✚ Elbow Incongruence
- ✚ Cartilage damage secondary to humeroulnar conflict

Affected dogs can be challenging to diagnose due to their active nature and the incidence of bilateral disease (up to 80% in some studies) masking the magnitude of lameness.

Without early treatment, medial compartment disease will inevitably lead to debilitating arthritis. The high prevalence and devastating effects of this disease justify the need for early intervention to minimise the impact on the dog's quality of life.

Early detection of medial compartment disease by first opinion veterinarians is therefore key to optimising the prognosis in this disease.

Diagnosis:

On distance exam affected dogs are often noted to abduct their elbow and stand with their paw placed in an externally rotated position.

(Fig 1. Abduction of the left elbow and external rotation of the paw. This stance is suggestive of medial elbow pain, consistent with medial compartment disease).

This is an adaptive stance to unload the medial compartment of the elbow and is a suggestion that disease may be present and warrants further investigation.

The four major findings with forelimb lameness attributed to early medial compartment disease are:

1. **Pain localised to the elbow** – especially with maximal flexion combined with supination (rotating the antebrachium/paw so the pads face up)
2. **Marked Elbow Effusion** – most prominent with the dog standing on the limb and located caudo-laterally between the lateral epicondyle and the olecranon.
3. **Osteophytosis of the anconeal process** – most readily appreciated on a maximally flexed lateral radiograph of the elbow (*Fig 3. Location of Anconeal Osteophytes*).
4. **Sclerosis of the ulna between the radial head and caudal margin of the ulna** – most readily appreciated on a lateral radiograph. (*Fig 4. Location of Subtrochlear Sclerosis*).



Fig 1.

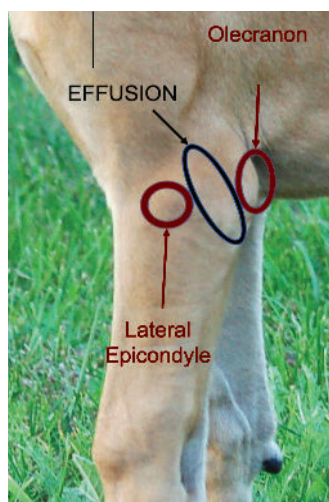


Fig 2.



Fig 3.



Fig 4.

Detection of any 2 (or more) of these findings raises a high index of suspicion for medial compartment disease and is an indication for elbow arthroscopy.

Arthroscopy is considered the gold standard for diagnosis of elbow dysplasia and has the added benefit of allowing simultaneous minimally invasive treatment.

Cases that do not show 2 or more of these major findings, but are still suspected to have medial compartment disease will benefit from CT assessment of the elbows to strengthen the index of suspicion prior to proceeding to arthroscopy. CT is superior to radiography in the detection of bony changes including sclerosis and osteophytosis and can allow early diagnosis in cases that have not advanced to the stage that these changes are radiographically apparent.

Treatment:

Treatment of medial compartment disease focuses on removing continued humeroulnar conflict via a combination of fragment/flap debridement, unloading osteotomies and cartilage resurfacing.

Unfortunately, progression of arthritis is likely and so surgical intervention should be considered part of a multimodal lifelong treatment plan that includes weight management, and standard medical management of osteoarthritis. Early and sustained implementation of these vital non-surgical aspects of disease management will help ensure the best possible outcome for dogs affected by this disease.

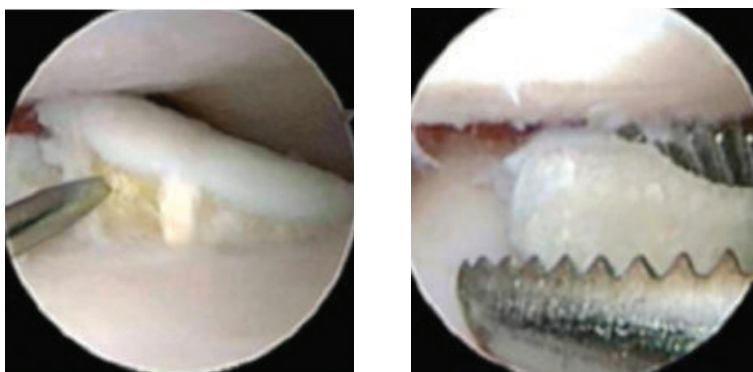


Figure 5. Arthroscopic removal of a large intra-articular fragment originating from the medial coronoid process

Melbourne Animal Specialist Hospital Can Help!

Melbourne Animal Specialist Hospital can help with management of cases of medial compartment disease from diagnosis through to treatment.

1. We offer complementary assessment of all orthopaedic radiographs by a registered specialist in small animal surgery. This allows us to advise if further testing, e.g. CT exam, is indicated, or in cases where the radiographs are diagnostic make a recommendation to proceed directly to arthroscopy.
2. Melbourne Animal Specialist Hospital has a full arthroscopic and orthopaedic inventory. Arthroscopic interventions are minimally invasive, and patients can typically be discharged the same day walking comfortably of the operated limb(s).
3. We also provide detailed management plans for both the owner and referring veterinarian and can assist with development of a comprehensive lifelong medical management plan.