

We still do not completely understand all of the contributing factors to elbow dysplasia. Occurrence is more common in large, pure breed dogs however, any breed can be affected. Dysplasia is a developmental orthopaedic disease. Clinical signs are often intermittent lameness and elbow pain. These often come to light when the patient is younger, but in some instances pain and lameness is only seen in later life, as the disease process progresses.

Dysplasia encompasses several disease processes in combination or alone.

Common Components

- Medial Coronoid/ Medial Compartment Disease
- Osteochondrosis lesion of the humeral condyle
- Un-united anconeal process
- Elbow congruency
- Medial epicondylitis/ flexor enthesiopathy.



Medial Coronoid/ Medial Compartment Disease

Medial Coronoid Disease can range in severity, from cartilage lesions, through to displaced fragments of the entire coronoid process and abnormal coronoid bone. This is often a source of pain and discomfort in its own right, however this can also lead to wear of the adjacent cartilage on the medial humeral condyle and further degenerative joint disease (Arthritis).

Osteochondrosis (OCD) lesion of the humeral condyle

Occasionally, development of the cartilage of the humeral condyle is interrupted, resulting in a flap of cartilage and exposed subchondral bone. The denuded area of cartilage is painful, both because the flap “catches” during movement and because of the exposed bone. When this happens, the elbow is usually very painful.

Un-united anconeal process

The anconeal process usually fuses to the ulna in early life. When this is interrupted by abnormal loading through the elbow, the process fails to attach properly and is loose. This loose fragment contacts the elbow when the elbow is extended and causes pain and lameness.

Elbow in-congruency

Elbow congruency describes how well the elbow “fits” together. The elbow is a tight, complex joint and large discrepancies in length of the radius and/or ulna can lead to poor fit and abnormal loading of the elbow. The affect of more subtle in-congruency is less well defined.



Medial epicondylitis/ flexor enthesiopathy

Often this is a secondary change, with inflammation of the inner side of the end of the humerus. In markedly affected cases, intervention may be recommended.

Cats seem to be more severely affected by these changes and severe cases benefit from surgery.

Treatment Options

Treatment options largely depend on the combination of pathologies and severity of the disease process seen. Arthroscopic examination of the joint often allows both treatment of some disease processes and assessment of cartilage health. CT scans are invaluable in determining the extent of the disease process present and helps to assess areas not visible by arthroscopy or plain x-rays.

In some cases, arthroscopy may be combined or replaced by additional procedures such as:

- debridement of the medial coronoid
- Removal of OCD flap
- Ulna osteotomy
- Screw fixation of un-united anconeal process
- Removal of chronic un-united anconeal process
- Biological joint treatments
 - Platelet rich plasma
 - Stem cell therapy
 - Hyaluronic acid

Load shifting procedures, such as PAUL or replacement of part of the joint or of the whole joint, is occasionally required in severe and non-responsive cases.

Prognosis and Outcome

Younger patients, without pre-existing arthritis, often have better initial outcomes. The combination and severity of ongoing disease processes will also affect outcomes.

All treatment options are aimed at reducing future arthritis and maximising elbow comfort. Unfortunately, there will always be a degree of progressive elbow arthritis and outcomes can be quite variable.

Patients with OCD flaps tend to require more intervention, have more painful elbows and worse long-term outcomes.

General management options can make a big difference. The following are important to consider, regardless of other interventions:

- *Analgesia as required (NSAIDS, followed by paracetamol, codeine, gabapentin, amantadine as necessary)*
- *Joint supplements (evidence of reduced inflammation and better pain management)*
- *Weight control - potentially the most important factor!*
- *Controlled, consistent exercise*
- *Physiotherapy and hydrotherapy*

