



**WEAR** REFERRALS  
Small Animal Hospital

**ORTHOPAEDICS**

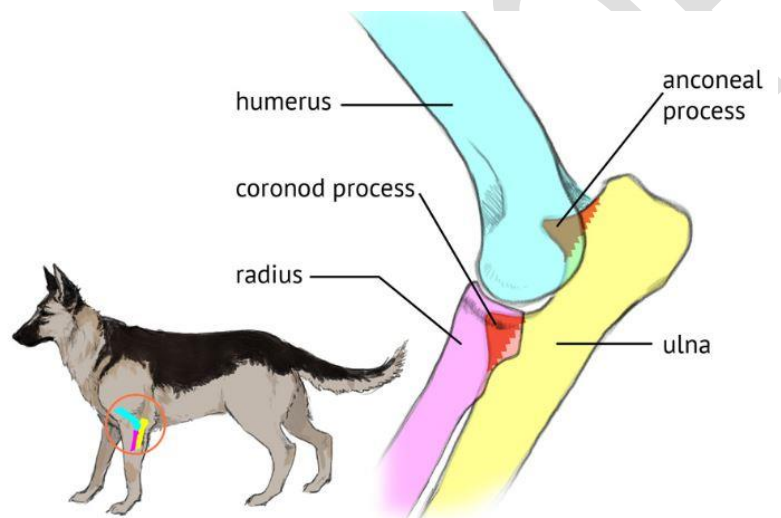
# **CANINE ELBOW DYSPLASIA**

**INFORMATION SHEET**

## CANINE ELBOW DYSPLASIA

Elbow dysplasia is a common condition affecting breeds such as Labradors, Rottweilers, Bernese Mountain Dogs, Spaniels and German Shepherd Dogs. Dysplasia means abnormal development and as such most dogs are lame as juveniles. Elbow dysplasia describes several conditions affecting the elbow joint:

- Ununited anconeal process
- Osteochondrosis of the humeral condyle
- Medial coronoid process disease



### **UNUNITED ANCONEAL PROCESS (UAP)**

This condition is common in German Shepherd dogs and is characterized by failure of fusion of the anconeal process to the ulna by 70 days of age. The condition can readily be diagnosed on radiographs. CT of the elbow is useful to look for concurrent other types of elbow dysplasia as well as assessing the congruency or fit of the joint.



#### *UAP- TREATMENT*

Numerous treatments have been described for management of UAP. Arthroscopy of the joint can be considered to evaluate for other elbow dysplasia such as coronoid disease and to probe the UAP to assess for instability. Based on the currently published literature, stabilisation of the UAP with a screw and wire in combination with cutting the ulnar bone (proximal ulnar osteotomy) appears to give the best chance of the process fusing back onto the bone and the best clinical result. However, osteoarthritis is often present in the joint and this will likely progress through the dog's life with there being the potential for some ongoing lameness.



#### **OSTEOCHONDROSIS (OC) OF THE HUMERAL CONDYLE**

This condition affects the articular surface of the humerus. The cause is likely to be due to trauma to the segmental blood supply in the bone below the region of affected cartilage. Subsequently the cartilage in that region may not form properly. In some cases this results in a defect in cartilage development, in other cases a flap of cartilage may form.



#### *OC- TREATMENT*

If a flap of cartilage / bone is identified on CT / arthroscopy then removal of this flap is recommended. Surgical techniques to resurface the damaged area of cartilage by placing a graft of cartilage and bone from another joint from the patient as well as implants to resurface the damaged portion of the joint had been described but there is currently a lack of good quality evidence documenting their long term superiority over flap removal alone As such it is at the discretion of both owner and surgeon where to pursue such surgical procedures.

#### **MEDIAL CORONOID PROCESS DISEASE (MCPD)**

MCPD This is the commonest type of elbow dysplasia. CT and arthroscopy are used to diagnose this condition as radiographs are not a reliable imaging modality.



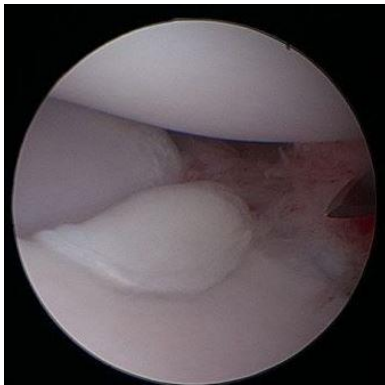
A spectrum of changes may be present in the medial coronoid process. Cartilage damage only, fissuring of the cartilage and bone and fragmentation can be present. Changes may be confined to the medial coronoid process only or may affect the cartilage on either the inside of the joint +/- outside

of the joint concurrently. The extent of damage that is present dictate the treatment options that can be recommended.

#### *MCPD- TREATMENT*

Surgical treatment options are numerous. There is a lack of good quality studies documenting the best way to treat this condition and as such procedures recommended is largely by individual surgeon preference in concert with careful discussion with owners as to what information we have available on outcomes from surgery. Surgical options include:

- Fragment removal
- Bioblique ulnar osteotomy
- Removal of the medial coronoid process (subtotal coronoid ostectomy)
- Proximal abducting ulnar osteotomy (PAUL)



Fragment on arthroscopy



PAUL



Bioblique Ulnar Osteotomy

If patients are young, if fragmentation of the coronoid process is present and changes in the rest of the joint are minimal we will sometimes remove bone/ cartilage fragments from the joint and see if the patient improves. Anecdotally some dogs appear improved, others not. Should lameness persist or there be more advanced damage in the medial joint compartment, then we will often perform PAUL or ulnar osteotomy. Subjectively approximately 80% of dogs have improved lameness following PAUL surgery within 6-12 months.

If elbow osteoarthritis is severe then BioMedtrix TATE elbow replacement can be considered. Subjectively about 75 % of dogs show improved function following this surgery.



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