Ununited Anconeal Process (UAP)

What is an ununited anconeal process (UAP)?

The anconeal process is a process on the top of the ulna that normally articulates with the humerus to help stabilise the elbow joint. An ununited anconeal process is a condition where the anconeal process fails to fuse to the ulna, and remains as a loose bony fragment. This causes pain and lameness, and results in cartilage damage of the elbow joint.

What breeds are predisposed to UAP?

Ununited anconeal process is most commonly diagnosed in large to giant breed dogs, including the Bernese Mountain Dog, German Shepherd, Golden Retriever, Labrador Retriever, Bull Mastiff, Newfoundland, Rottweiler and Saint Bernard. It is most common in large to giant breeds because these dogs have a separate centre of ossification within the anconeal process, meaning it is not fused to the ulna when the dog is born. This fusion usually occurs at around 16-20 weeks of age.

What causes UAP?

The cause of UAP is multifactorial, and includes nutritional deficiencies, genetic factors, growth rate and trauma. Elbow joint incongruity is also involved in this disease, which causes repeated damage to the anconeal process and results in failure to fuse to the ulna.

How is UAP diagnosed?

Ununited anconeal process is easily diagnosed based on physical examination and plain radiography. Dogs will often present for a gradual onset of weight-bearing forelimb lameness that is generally chronic and worse after exercise. There is pain on palpation of the elbow, and during extension (straightening) of the elbow joint.

Radiographic diagnosis should be made when the patient is 22-24 weeks of age due to the timing of fusion in these large breed dogs.

Sometimes, advanced imaging such as a CT scan, is required to assess the presence of other damage to the elbow joint, or in cases where the anconeal process is loosely attached to the ulna.

How is UAP treated?

The most appropriate treatment for UAP is usually removal of the anconeal process. This involves making a small incision at the back of the elbow, and removing the anconeal process.
Surgical reattachment of the anconeal process is also available. However this method should only be performed in animals less than 24 weeks of age with a normal shaped ulna. The best surgical method will be determined based on clinical examination and radiographic assessment. North Coast Veterinary Specialist and Referral Centre have employed a unique type of screw for this purpose, which we use in conjunction with a proximal ulna osteotomy, which aims to fix any concurrent elbow incongruity if present.