

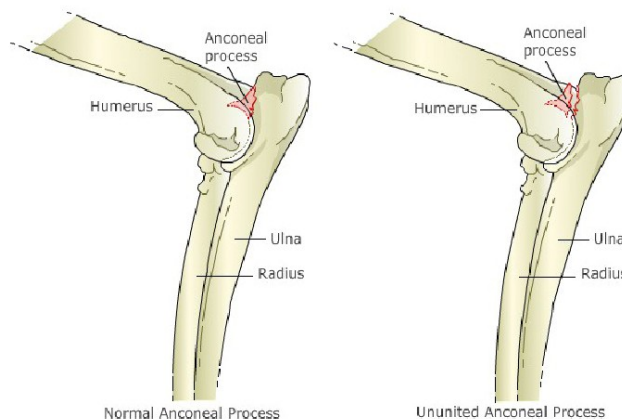
Ununited Anconeal Process or UAP in Dogs

The elbow joint is made up of 3 separate bones, the radius, the ulna, and the humerus. A problem called elbow dysplasia is a developmental abnormality that occurs in the elbow joint of dogs, mostly of the medium to large breeds. There are 3 developmental problems that may be called elbow dysplasia, namely a fragmented coronoid process (FCP), an ununited anconeal process (UAP), and osteochondritis dissecans (OCD). There is a separate handout for each of these conditions. Dogs with elbow dysplasia typically have only one of the three conditions, and it is rare for a single dog to have all three components of elbow dysplasia.

What is an Ununited Anconeal Process?

The anconeal process is a small projection of bone on the ulna, the longer of the two bones of the forearm. The anconeal process forms part of the back surface of the elbow joint. There is a growth plate between the anconeal process and the rest of the ulna.

Growth plates are found at the ends of the bones in growing animals, and are the sites of bone growth during development. Normally, as the dog reaches puberty, the growth plates close, fusing the parts of the bone together. The growth plate between the anconeal process and the ulna normally fuses by about 5 months of age. If the anconeal process does not fuse to the rest of the ulna correctly, it causes a condition called Ununited Anconeal Process (UAP). This condition is one of three conditions that are sometimes also called "elbow dysplasia".



Is this condition hereditary?

"This problem does appear to be hereditary in certain breeds."

This problem does appear to be hereditary in certain breeds, mostly large breeds. In affected animals, there appears to be an abnormality in the growth plate and the anconeal process fails to fuse or unite to the main part of the ulna. German Shepherds seem to be particularly affected by the problem, although it does occur in other breeds, and males are more commonly affected. There may be dietary factors involved in the development of this condition, since there is a correlation between diets that contain too much energy and calcium and the development of elbow dysplasia.

What are the symptoms of UAP?

When this part of the ulna does not fuse, the elbow joint becomes unstable, causing lameness and pain. The instability causes inflammation, and eventually the inflammation and instability will lead to the development of degenerative joint disease or arthritis. In some cases, the bone fragment floats freely in the joint, causing further discomfort.

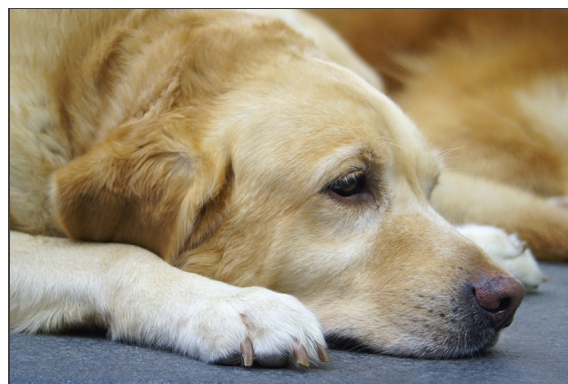
Dogs with this disease are lame on the affected leg or legs and they may cry when the elbow is extended. Often the affected elbow joint has a decreased range of motion.

How is the condition diagnosed?

The results of a physical examination are often highly suggestive of this problem. However, other conditions can cause elbow dysplasia, including fragmented coronoid process (FCP) and osteochondritis dissecans (OCD). UAP can be diagnosed by means of radiographs of the elbow. In some cases, this may require a short-acting anesthetic or sedative in order to achieve the optimal positioning for diagnostic purposes. In some cases, it may be necessary to have the x-rays examined by a veterinary radiologist for confirmation of the diagnosis.

How is UAP treated?

Treatment requires surgery. The traditional treatment is removal of the anconeal process from the joint. A more recent approach to surgery is to use screws to reattach the anconeal process to the ulna. Your veterinarian may recommend a referral to an orthopedic surgeon for surgical correction, depending on the case. In all cases, surgery should be performed as soon as possible, and results are much better if surgery is done before secondary arthritis affects the joint.



What is the prognosis with and without surgery?

If the ununited anconeal process is not treated surgically, the lameness will progress rapidly and the dog will be in severe pain. If surgery to reattach the UAP is delayed, or if the condition is severe, the fragment edges may not match well because of the erosion of bone and cartilage, so the piece may not be easily fixed in place. Since the condition is caused by a developmental defect, it is also possible that healing will be slow.

In all cases, some degree of arthritis will develop in the elbow joint, but with surgical treatment, the arthritis will usually be less severe and there will be less pain involved. Medical treatment such as joint protective supplements and/or anti-inflammatory medications may be recommended to delay progression of degenerative joint disease.

Will my dog need rehabilitation?

"Restrict your dog's exercise."

Some form of rehabilitation will improve your dog's chances of making a full recovery from surgery, and minimize lameness problems. You will need to restrict your dog's exercise for the first few weeks to months after surgery, which usually means that your dog will only be allowed to go for controlled leash walks. If the UAP is reattached to the ulna with a screw, it is recommended that weight-bearing activities be restricted until healing is complete, for up to 8 to 12 weeks in some cases.

Your veterinarian will design the appropriate program for your dog, or if a canine rehabilitation program is available in your area, may refer your dog for treatment.

My veterinarian has recommended surgically sterilizing my dog. Why is this?

Since the condition appears to be hereditary, affected dogs should not be used for breeding.

If your dog is a purebred, you should notify your breeder. Many breeders of large breed dogs have their breeding stock cleared for this condition (called elbow certification) prior to using them in a breeding program.

*This client information sheet is based on material written by: Cheryl Yuill, DVM, MSc, CVH
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