Humeral Condylar Fissures
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What is a humeral condylar fissure (crack)?

The humeral condyle is the name given to the end of the bone (called the humerus) at the top of the front leg (the forelimb). Along with the radius and the ulna (the two bones of the antebrachium or forearm), the humeral condyle makes up the elbow joint. In some dogs, a crack or fissure can form across the humeral condyle. This can be painful and cause lameness, and it can also predispose the condyle to a complete fracture or break. These fractures are often not caused by any major trauma, but can occur during normal exercise. The condition has also been referred to as incomplete ossification of the humeral condyle (or IOHC).

Humeral condylar fissures occur more commonly in spaniels than other breeds. Some dogs are affected as puppies (developmental), but the majority develop a fissure in their humeral condylar when they are adults. Dogs may become lame and in pain when the fissure first develops; in other cases the problem is not identified until the bone breaks completely with the development of a humeral condylar fracture.
How are humeral condylar fissures investigated?

Large fissures or cracks within the humeral condyle can be detected on X-rays, but incomplete or subtle fissures can often only be diagnosed on a CT scan. A CT scan uses X-rays to produce multiple thin cross-sectional slices across the affected area and avoids the problem of superimposition of structures, as occurs on a traditional X-ray. Because humeral condylar fissures often affect both forelimbs, it is usually recommended to CT scan both elbows.

What aftercare is needed?

Most dogs can go home the day after the operation. Walks on the lead can be started immediately, but unrestricted exercise off the lead, such as running or jumping, must be avoided. Painkillers are usually given for a week or so, but most dogs are very comfortable immediately following surgery. Dogs that have undergone surgery need to be taken to their local vets for a check-up within the first two weeks. We would normally plan to re-examine patients four to six weeks after the operation.

What are the risks and possible complications?

Historically, surgery to treat humeral condylar fissures has had an unusually high complication rate. These complications could include swelling under the stitches and infections. We have developed new techniques for carrying out the operation and this has led to a much reduced complication rate.

In the long term, the fissure is unlikely to heal completely as it is caused by defective bone. As a result, patients have to rely on the implanted screw to support their weight for the rest of their lives. With every step such dogs take, a small force is placed on the screw, and in some patients this can lead to the screw breaking. If this occurs, another operation may be needed to replace the screw.

What is the outlook for my dog?

With new surgical techniques the complication rate following surgery is now much lower than in the past. More than 90% of dogs will be sound within a few weeks of the operation and can regain a normal quality of life. As mentioned above, there is a small risk of screw breakage in the long term which could necessitate further surgery.

Why should I bring my dog to Willows for humeral condylar fracture surgery?

Our orthopaedic service is led by a team of recognised, accredited RCVS Specialists and we aim to provide the best possible treatment for your pet in our state-of-the-art hospital. Our orthopaedic Specialists are supported by imaging and anaesthesia Specialists, and dedicated out-of-hours vets and nurses. We have on-site CT facilities which allow dogs suspected of having a humeral condylar fissure to be investigated immediately. We have extensive experience of successfully treating condylar fissures, and we have presented our results at national and international veterinary orthopaedic meetings.

We are always happy to discuss any aspects of a case with you or your vet prior to referral. If you have any questions or concerns please contact us.