

## **BONE DISEASES OF GROWING DOGS**

*I have a young dog with a lameness that has been present for several days. Could this be serious?*

There are many causes of lameness. Most of these are relatively minor and are within the body's healing capability. However, there are also causes that are not self-limiting and, if not treated promptly, may result in permanent lameness and/or arthritis. The large breeds of dogs (i.e., those whose adult weight is over 60 pounds) have several bone diseases that occur during the period of rapid growth (up to 2 years of age). Because of the possibility of permanent lameness resulting, we recommend an accurate diagnosis if a lameness lasts more than 2 weeks. In order to get a diagnosis, a set of radiographs (x-rays) is made of the affected leg(s). In some cases, the opposite (normal) leg is radiographed for comparative purposes. Several radiographs are necessary in order to get an accurate look at various bones and joints. In most cases, this will require a short-acting anesthetic in order to get the positioning that is necessary.

*What diseases are likely?*

The following diseases will be considered as we radiograph your dog:

### **Rear legs only**

1) **Hip Dysplasia** is an improper formation of the hip joint(s). This is a ball and socket joint. Hip dysplasia results in the ball not being round, the socket not being deep, and the two not fitting together well. Hip dysplasia has several contributing causes, but the primary cause is genetic. A dog of the high-risk breeds for hip dysplasia should not be bred before radiographs of the hips are taken.

Dogs with severe hip dysplasia have great difficulty going from a lying to a standing position and are in pain when they walk. Dogs with mild hip dysplasia may show no signs of lameness. However, as the dog ages it will usually experience difficulty rising and may be reluctant to run and play as in the past. There are several choices of treatment depending on the severity. Some involve medication; some require surgery.

### **Front legs only**

1) **Elbow Dysplasia** is a lack of fusion of the top of the ulna at the rear point of the elbow. This is more properly termed ununited anconeal process. When this part of the ulna does not fuse, the joint is unstable and is quickly subject to arthritis. Dogs with this disease are lame on the affected leg(s) and they may cry when the elbow is extended. Treatment requires surgery. The results are much better if surgery is done before secondary arthritis affects the joint(s).

2) **Fractured Coronoid Process** is the fracture of a small process (protrusion) on the radius within the elbow joint. When this process fractures, pain and joint instability result. Unless surgery is done promptly after the fracture occurs, return to normal use of the leg is unlikely.

## **Front or rear legs**

1) **Panosteitis** is an inflammation on the surface of the long bones. This is also termed "long bone" or "growing pains." This may occur in more than one bone at a time and may cause lameness in one bone or leg and then another. It is self-limiting but may recur until rapid growth is over. The pain may be relieved with several types of medication.

2) **Osteochondrosis dissecans (OD)** is a defect in the smooth cartilage surface within one or more of several joints. It may affect the shoulder (most commonly), the elbow, the hip, the knee, or the stifle. Some of these defects may heal with confinement of the dog for several weeks. However, most do not and a few may result in a piece of cartilage breaking off and floating freely in the joint. This disease causes pain, which varies in its severity. It is best treated with surgery to remove the defective cartilage.

3) **Hypertrophic Osteodystrophy (HOD)** is an inflammation in the growth plates of the long bones. It usually causes swelling and pain in the joints, which may lead to fever and loss of appetite. It is self-limiting in most dogs with no permanent damage. However, some dogs may suffer permanent damage to the growth plates resulting in deformed legs. Treatment is with medication to relieve the pain and suppress the inflammation.