Elbow Dysplasia

- Elbow dysplasia is a painful, debilitating, and typically inherited disease.
- The disease is a failure of the bones and cartilage in the elbow joint to grow and develop properly.
- The causes of elbow dysplasia can be multifactorial.
- Both elbow joints are typically affected although some dogs may experience it in just one.

What Is Elbow Dysplasia?

Elbow dysplasia is a painful, developmental disease that affects the elbow joints. The disease has a genetic basis, but nutrition and other factors play a role as well. Large breed dogs (such as Great Danes and Labrador retrievers) can be affected, as well as smaller dogs, like Dachshunds. Elbow dysplasia is essentially a failure of the bones and cartilage in the joint to grow and develop properly. Affected dogs experience pain, varying degrees of lameness, and may have elbow joints that are nonfunctional.

There are three bones in the elbow joint that must work together: the ulna, the radius, and the humerus. These bones must align together correctly and have normal, healthy cartilage in order for the joint to work properly. When this doesn't occur, the joint becomes unstable and varying degrees of lameness and osteoarthritis can result. Elbow dysplasia can occur in three forms:

- ***Ununited anconeal process:*** A section of bone on the ulna, called the anconeal process, doesn't unite properly with the rest of the ulna during bone growth.
- ***Fragmented coronoid process:*** A small piece of bone on the inside of the elbow joint develops abnormally and breaks away from the ulna bone, causing damage within the elbow joint.
- ***Osteochondritis dissecans:*** A piece of cartilage becomes partially or fully detached from its normal place inside the elbow joint.

Each of these conditions can produce debilitating pain in the affected joint and lead to osteoarthritis and other degenerative changes.

What Are The Signs?

The first signs of the disease are typically foreleg lameness and gait abnormalities (changes in the way the dog walks). The disease most typically appears in larger breed dogs, and affected dogs generally begin to exhibit signs of lameness and pain in the elbow joint between four and six months of age. Some clinical signs include:

- A dog that appears to try and shift weight to its rear legs
- An abnormal gait that looks as if the dog is "paddling" its feet
- Decreased activity level
- Difficulty rising
- Stiffness upon rising
- Muscle atrophy (wasting)
- Swelling in the elbow area

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Breeds that are most commonly affected include:

- Bernese Mountain dog
- German shepherd
- Rottweiler
- Golden retriever
- Labrador retriever
- Newfoundland
- Saint Bernard

Diagnosis

Diagnosis of elbow dysplasia can be made based on clinical signs, physical examination, gait analysis, and diagnostic imaging. Radiographs (x-rays) are typically used to confirm elbow dysplasia but in some cases diagnostic arthroscopy, MRI (magnetic resonance imaging), or other diagnostic imaging may also be recommended. During the physical examination, the veterinarian will look for signs of reduced range of motion in the joint as well as muscle atrophy.

Treatment and Outcome

Treatment of elbow dysplasia depends on its severity and may include a combination of medical and surgical options. Medical treatment includes weight management, appropriate exercise, physical therapy, NSAID (nonsteroidal anti-inflammatory drug) therapy, and joint supplements. Surgical options are also available. Depending on the type of elbow dysplasia, the age of the dog, and the severity of the condition, your veterinarian will discuss whether surgery is recommended for your dog.

Long-term outcomes for most dogs with elbow dysplasia can be fairly positive. Many dogs develop osteoarthritis before diagnosis or as the disease progresses, so long-term management includes managing osteoarthritis.

As with most degenerative diseases, early treatment may result in a better outcome.

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