

Osteochondritis Dissecans

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Introduction

As with humans, canines have a host of orthopedic conditions that may develop throughout the stages of their lives. Some canines have a genetic predisposition to certain conditions based on heredity; while some may develop a condition through improper diet, repeated physical impact to growing limbs, obesity, trauma and size and type of breed. The possibilities are boundless and the combinations may or may not result in a disorder. In other words, every canine is unique, but predispositions are a reality. The purpose of this paper is to discuss the orthopedic condition known as Osteochondritis Dissecans or (OCD).

What is OCD?

OCD is a joint disorder of the immature long bones.

The underlying pathology of OCD has to do with the failure of the normal bone and joint growth process. If the growing long bones develop a crack in the cartilage of the weight bearing surface, it is possible for the cracks to extend deep into the soft bone beneath the cartilage and separate creating a cartilage flap that ranges in size from smaller than a quarter inch, to over an inch in diameter. This cartilage flap begins to irritate the joint. From there, inflammation and the body's attempt to heal the area through the development of scar tissue and calcium deposits can negatively impact the affected joint. Pain occurs when the flaps become wedged between the two bones that form the joint. Next, extra joint fluid builds up while nerve endings become irritated. The introduction of scar tissue and calcium deposits may result from the body's attempt to heal the tissue. A canine with OCD may experience moderate to severe pain and exhibit little to extreme lameness.

The Nature of the Condition

OCD typically occurs in young, large and giant-breed dogs. There is not a direct cause related to OCD, but in general, it is believed to have a genetic component. OCD of the shoulder occurs twice as often in male dogs than in female dogs. OCD of the hock occurs more often in female dogs.

Symptoms usually develop between 4 to 10 months of age and may develop in several joints. The clinical signs of OCD depend on the severity of the condition. A dog with OCD may exhibit the following symptoms:

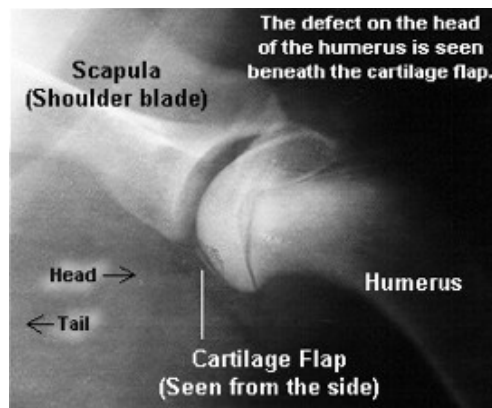
- Inflammation
- Joint instability
- Pain

- Lameness (lateral and bilateral)
- Degenerative joint disease
- Barely noticeable to severe limp
- Unable to bear weight on the leg
- Lameness worsens after periods of exercise
- Improves after rest
- Shortened forelimb stride (front shoulder)
- Crepitus (grating noise of bones rubbing against each other)
- Decreased range of motion

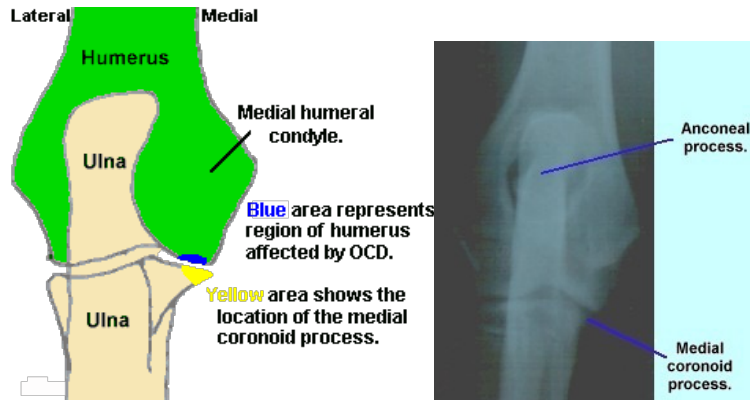
A diagnosis of OCD can be obtained by the following

- History
- Physical examination
- X-rays (radiographs)
- Positive contrast arthroscopy
- Crepitus (crackling noise of bones rubbing against each other)
- Noticeable Pain
- Restricted mobility or extension
- Swelling

It is also of consequence to correctly diagnose OCD and rule out other conditions that mimic some of the symptoms of OCD such as cartilage fractures, elbow dysplasia, and panosteitis.



(In the above photo, a cartilage flap is easily seen on the head of the humerus)



(Fragmented medial coronoid process is the most common)

Common Treatment Approaches

Treatment for OCD usually consists of either surgery or conservative treatment.

The surgical approach is essentially the same whether it is on the shoulder, elbow, hock or stifle. Under general anesthesia the loose flap of cartilage is removed. The results are generally good, and most dogs make a complete recovery.

The conservative treatment approach consists of the following:

- Pain relief
- Exercise restriction
- Dietary control

Rehabilitation Options

The surgical route will include a period of recovery with instructions from the performing surgeon. These will likely include a period of rest, prescription NSAIDs and pain medication. Within 2-weeks the dog is usually released to resume normal activity and begin physical therapy.

The conservative treatment approach will include crate rest, and limited exercise, usually brief leash walks.

Some rehabilitation options for both treatment approaches may include: hydrotherapy, laser, massage, and physical therapy.

Benefits of Massage

Massage for surgical treatment of OCD will aid in:

- Supporting immune system function
- Removal of waste products
- Tissue repair
- Improving circulation
- Contribute to the health and recovery of the skin and coat
- Support the beneficial components of the inflammatory response

Massage for the conservative treatment approach will aid in:

- Supporting immune system function
- Removal of waste products
- Address issues such as boredom and depression
- Support pain
- Inflammation management
- Maintain motion and circulation while resting

Conclusion:

I have worked with many clients with orthopedic conditions, and OCD specifically. The clients that went onto have surgery, all recovered early or within the normal timeline indicated by their surgeons with the exception of one client, a golden retriever. She has had 2 surgeries on her left shoulder and intermittent lameness occurs when she plays too roughly with her littermate.

I have swum and performed massage on mostly post-op clients; however I have seen a small number of canines for non-specific shoulder, elbow and hock lameness of varying degrees. With a consistent swim and massage program, we have seen great results. The only setbacks we tend to see in post-op and non-operated on canines, is when they attempt to do too much too fast on land. That usually results in temporary lameness and the guardian cuts back on the land activity and things improve.

In conclusion, in general, dogs with OCD have an excellent prognosis following surgery whether they attempt the conservative approach or not. New procedures are continually introduced to assist in giving canines a better, less painful life.