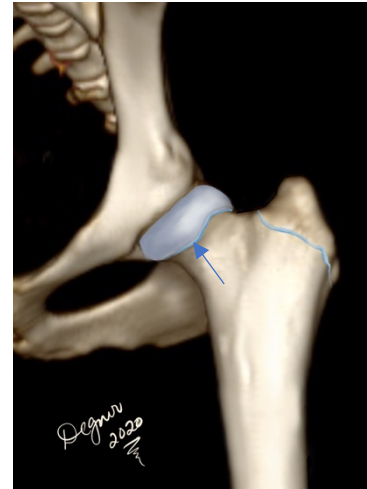


Capital Physeal Fracture of the Proximal Femur

Basic facts

A fracture is synonymous with a broken bone. Puppies have growth plates at the ends of the femur bones from which the bone grows. Growth plates are susceptible to developing fractures in immature animals. One such growth plate is called the capital physis or growth plate of the head of the femur bone (see arrow on illustration right). The head forms the ball of the hip joint. When a fracture occurs through this growth plate the cap of the head (epiphysis) of the femur slips off, hence this fracture is referred to as a “slipped cap”.



Cause of fracture



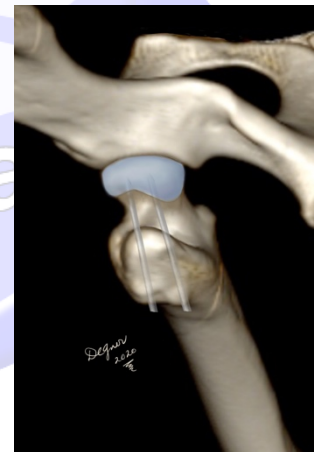
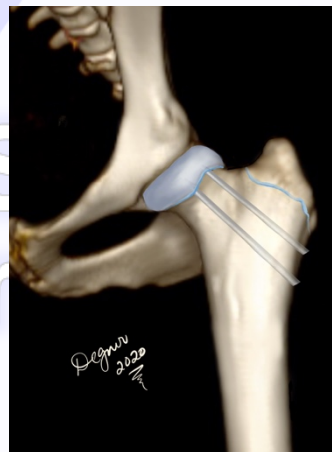
This type of fracture only occurs in dogs that are less than one year of age and cats that are 2 years of age or younger. The most common cause of a femoral fracture is trauma such as being struck by a motorized vehicle or taking a fall. Cats can have a genetic disorder called physeal dysplasia that causes the capital physeal fracture, but in dogs this problem is usually caused by trauma.

Surgery

Slipped cap fractures require surgery for a successful outcome. The surgery should be done as soon as possible so that broken end of the bone does not get worn down, thus preventing the fracture from fitting together properly. In medium to



large dogs, primary repair of the fracture is recommended. Generally, two pins are inserted in the bone to stabilize the fracture (see photo next page). If this is not possible, total hip replacement is also a good surgical option.



In small dogs and cats, a simple procedure called a femoral head and neck excision is a very acceptable treatment and provides an acceptable outcome in most patients. This involves removing the broken fragment and the neck of the femur bone in order that a false joint will form (see figure right).

Home care

After surgery, you can continue to give your pet a prescribed pain reliever to minimize discomfort. It's also extremely important to limit your dog's activity and exercise level during this post-operative period. A sling will be placed on your companion's hind limb to prevent weight-bearing during the first 10-14 days after surgery. Rehabilitation exercises can be done at your home or if you choose, by professionally trained therapists at an animal rehabilitation center. Rehabilitation therapy should be continued until your dog is bearing weight well on the operated limb (typically 2 - 4 weeks after surgery). Detailed instructions will be given to you after the surgery. The surgeon will monitor the healing process with two follow-up exams. The first is scheduled at two weeks after the surgery and the second is at eight weeks after the surgery. By 8 to 10 weeks after surgery, most dogs are fully weight-bearing on the operated limb, although exercise should be limited during the first three months after the procedure.

Results

Surgery usually gives an acceptable outcome; however, it is possible that the dog may not be a good athlete (such as a hunting dog). Dogs that are 4 months and younger tend to develop much more arthritis than older puppies with the same fracture. Uncommon complications include infection, breakage of the pins, and sciatic nerve damage. In general, most small dogs and cats that receive a femoral head and neck excision surgery regain very good function on the limb. Primary repair of the fracture has been reported to be successful in 80% of the cases, whereas, no surgery will result in persistent lameness and hip pain.

References

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2. DeCamp CE, Probst CW and Thomas MW. Internal fixation of femoral capital physal injuries in dogs: 40 cases (1979 to 1987). *J Am Vet Med Assoc* 1989;12 :194(12)1750-4.
3. McNicholas WT, Wilkens BE, Blevins WE, et al. Spontaneous femoral capital physal fractures in adult cats: 26 cases (1996–2001). *J Am Vet Med Assoc* 2002;221:1731–6.
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Assessment and recommendations

Patient: _____ Date: _____

Treatment

- Surgery is recommended
- Surgery is not needed – continue cage rest for _____ weeks

The following has been prescribed

- No medications or special diet are necessary at this time
- Pain controlling medication: _____
- Nonsteroidal anti-inflammatory medication: _____

Exercise

Confine your pet to the house other than very short leash walks necessary for bowel movements and urination

Preparation for surgery

- Start fasting your companion at midnight before the surgery; water should not be withheld
 - Pepcid AC 10 mg tablets: give _____ tablet(s) with water (use a syringe if needed) at 6 AM
- on the day
of surgery

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