Femoral Fractures

Basic facts

A fracture is synonymous with a broken bone. The bone between the hip and the knee joint is called the femur bone (see illustration right). 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. The sciatic nerve runs along the backside of the femur bone and may be injured by a sharp broken femur bone.

Cause of fracture

The most common cause of a femoral fracture is trauma such as being struck by a motorized vehicle. Gunshot injuries not only will fracture the bone, but also will result in a dirty open wound. This could potentially result in infection and delayed healing of the bone. Also, if the fractured bone is sharp it may penetrate through the skin and result in infection of the bone. If the pet sustains a fracture without any known trauma, there may be an underlying disease that has weakened the bone such as nutritional deficiencies. Foods that have too much phosphorus and too little calcium or too much vitamin A will make the bones weak. Some animals have an inherited collagen defect that weakens the bones, resulting in bone fractures with minimal trauma. Bone cancer also can weaken the bone and predispose the pet to a spontaneous fracture.

Surgery

Two-piece fractures of the femur are commonly stabilized with a bone plate and multiple screws (illustration right). If the bone is broken in multiple pieces, called a comminuted fracture, an interlocking nail is typically the fixation apparatus of choice (illustration far right). Both of these treatment options provide the least aftercare for the client and a successful outcome in most cases. Femur bone fractures cannot be casted or successfully splinted. In addition, this form of treatment usually will result in a failure of the bone to heal or inappropriate healing of the bone (misaligned bone).
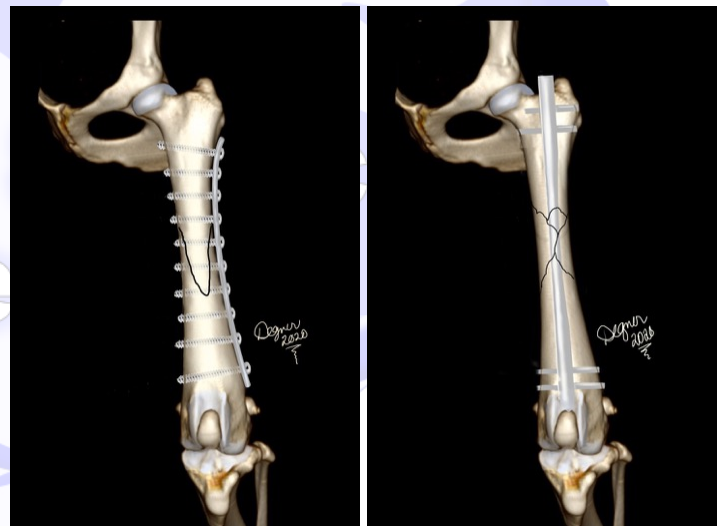
Home care

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. 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 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

Surgical repair of a fractured femur with a plate and screws offers multiple benefits including a faster recovery, earlier use of the limb after surgery, better chance to return to athletic activity, less risk of a second surgery being required, and better range of motion of the joints above and below the fracture. Uncommon complications include infection, nonhealing of the fractures, breakage of the metal plate, osteoporosis of the bone, bone cancer induce by metal implants, and sciatic nerve damage.

Assessment and recommendations

Patient name: _____   Date: _____

Treatment
□ Surgery is recommended
□ Surgery is not needed

The following has been prescribed
        □ No medications or special diet are necessary at this time
        □ Pain controlling medication: _____
        □ Nonsteroidal anti-inflammatory medication: _____
        □ Antibiotics: _____

Exercise
        □ Confine your pet to the house other than very short leash walks necessary for bowel movements and urination
        □ Confine your companion to a crate or cage

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 (if needed use a syringe) at 6 AM on the day of surgery