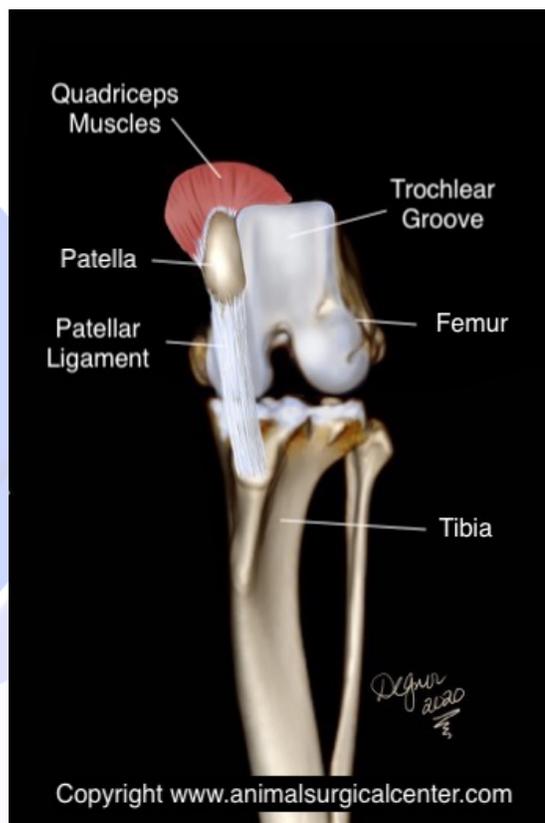


Patellar Luxation

Anatomy

The patella also known as the kneecap normally rides in the trochlear groove which is located at the bottom of the femur bone. The quadriceps muscles are attached to the top of the patella. The patellar ligament connects that patella to the tibia on a bony protrusion called the tibial crest. Ligaments on the sides of the patella prevent it from dislocating out of the groove. The illustration right shows the patella dislocated out of the groove.



What is a luxating patella?

The patella or kneecap normally rides in a groove at the bottom of the femur in the knee joint. The luxating or dislocating kneecap is a condition in which bony abnormalities result in distortion of the knee joint so that the forces applied to the kneecap cause it to hop out of a groove (trochlea) located at the bottom of the thigh bone.

The abnormalities of the knee that promote the kneecap to dislocate include a shallow groove (trochlea), twisted shin bone resulting in the tibial crest to be misaligned, torn (or stretched) soft tissues that normally hold the kneecap in place and in some cases significant bowing or twisting of the bottom of the femur bone. Dislocation of the kneecap also causes the shin bone to turn inward which may cause the cranial cruciate ligament (CCL) to tear. In fact, about 20 to 25% of the dogs that have a patellar luxation sustain an injury to this main stabilizing ligament of the knee. Clinical signs of a dislocating kneecap include lameness, intermittent skipping gait, intermittent crying out or unwillingness to jump on elevated surfaces.

Diagnosis

The diagnosis is made on physical examination, in which the surgeon can feel the kneecap dislocate out of place. In some cases, x-rays of the knee and thigh bone will be made to evaluate for twisting of the femur bone. This is most commonly indicated in large breed dogs. Other diagnostic tests that will be completed prior to surgery include a complete blood count, chemistry profile to ensure that your pet can handle nonsteroidal medication that will be prescribed after surgery and to make sure that your pet is healthy to undergo general anesthesia.

The day of surgery

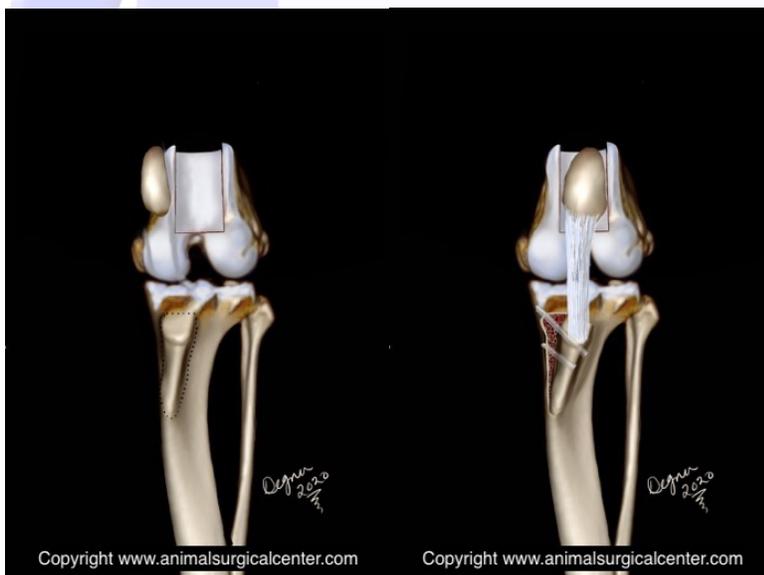
Our anesthesia and surgical team will prescribe a pain management program, both during and after surgery, that will keep your companion comfortable. This may include a combination of general anesthesia, injectable analgesics, oral analgesics, a pain-relieving patch and anti-inflammatory medication.

Treatment

The goal of surgery is to correct the anatomy of the knee so that the kneecap will remain in the trochlea. If the trochlea is shallow, the area is surgically deepened to create a groove that will capture the kneecap (top arrow).



Next, the alignment of the patellar ligament is assessed and if not in line with the trochlear groove it must be moved over. This is accomplished by cutting the front of the tibia bone, moving it over, and securing the bone with pins. The pins are permanently left in place under normal circumstances.



As a final step, the stretched soft tissues along side of the patella are trimmed and stitched together to pull the kneecap back into the trochlear groove.

In large breed dogs, a bowed thigh bone which contributes to a dislocating kneecap, needs to be corrected. This is done by cutting, straightening and supporting the bone with a metal plate and screws.



Aftercare and results

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 using the limb well (typically 2 - 4 weeks after surgery). Detailed instructions will be given to you after the surgery.

The healing process will be monitored by the surgeon 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 2 weeks after surgery, most dogs are bearing moderate to near full weight on the operated limb. During the first two months after surgery, when the bones are healing, exercise should be restricted. Full activity can resume in three months after the surgery.

About 90% of dogs that undergo this surgery will make a full recovery. Dogs that have a severe case of patellar luxation may have a recurrence of patellar luxation, necessitating a second operation.

Assessment and recommendations

Patient: _____ Date: _____

Treatment

- Surgery is recommended
- Surgery is not recommended

The following has been prescribed

- No medications or special diet are necessary at this time
- Prescription joint diet: _____
- Neuroceutical: _____
- Nonsteroidal anti-inflammatory medication: _____
- Other medication: _____

Exercise

- Unlimited
- Confine your pet to the house other than very short leash walk necessary for bowel movements and urination
- Restrict exercise to leash walks 10 minutes twice daily

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

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