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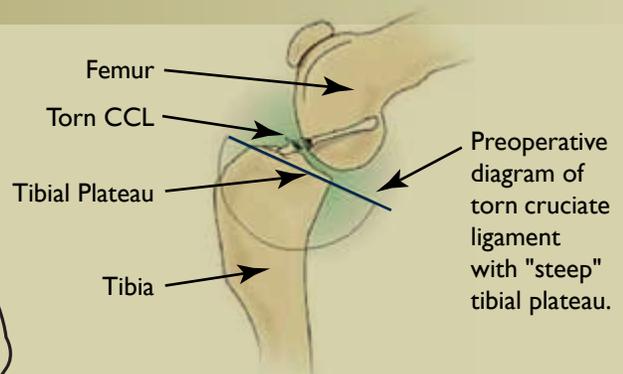
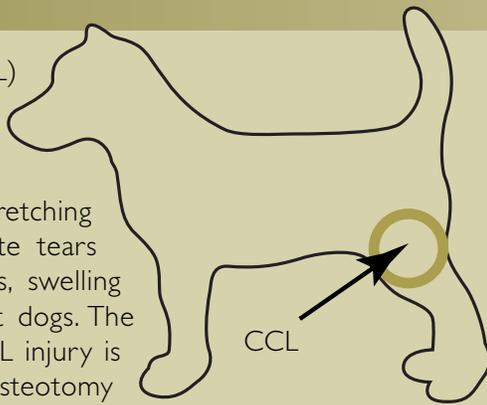
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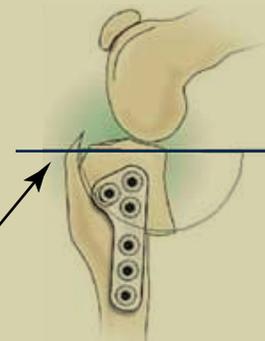
TIBIAL PLATEAU LEVELING OSTEOTOMY

HOW IT WORKS

Cranial cruciate ligament (CCL) injury is common in dogs, but occasionally occurs in cats. The ligament may rupture as a result of acute injury or repeated stretching and tearing. Partial or complete tears of the CCL result in lameness, swelling and eventually arthritis in most dogs. The only effective treatment for CCL injury is surgery. Tibial plateau leveling osteotomy (TPLO) is a surgical treatment for animals with partial or complete rupture of the cranial cruciate ligament. The technique takes advantage of the biomechanics of the knee joint and restores stability to the joint by changing the joint so that the animal can bear weight and walk even with a torn cranial cruciate ligament. Unlike many other surgical techniques used in the repair of CCL injury, the TPLO does not rely on the healing and long term strength of soft tissues or foreign material for restoration of function.



Model and post operative diagram of joint after TPLO. Notice leveling of tibial plateau.



INDICATIONS

Prior to performing a TPLO, the diagnosis of torn CCL must be confirmed. This is accomplished through various diagnostic steps including physical examination, joint taps, radiographs, occasionally arthroscopy or MRI.

The tibial plateau leveling osteotomy is indicated in many dogs with partial or complete rupture of the cranial cruciate ligament.

Specially positioned radiographs are taken pre-operatively to evaluate the conformation of the joint and plan the TPLO.

PROCEDURE

- The TPLO procedure is designed to level the plateau of the tibia.
- This is accomplished by cutting the tibial bone with a saw.
- The top portion of the tibia is rotated to its new position.
- The tibial plateau is stabilized in its new position using internal fixation (bone plate, screws, and sometimes a pin)
- The TPLO eliminates the instability that is created between the tibia and the femur when the CCL is torn.

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POSTOPERATIVE CARE



Incisions take 10-14 days to heal. Sutures should be removed in 10-14 days. Placing an ice compress (wrapped in a pillow case) over the incision will help minimize swelling and discomfort. This cold pack should be applied for 5 minutes 2-3 times per day for the first 3 days. If your pet licks or chews at the incision, you should contact your pet's surgeon or regular veterinarian for advice. Your pet's activity level should be restricted as instructed at the time of discharge during the first 6-8 weeks post-operatively. Use a sling to support your pet's hind end during the first 6 weeks post-operatively. X-rays to confirm healing of the TPLO should be taken between 4-8 weeks post-operatively (this varies by surgeon). After we evaluate the x-rays, we will suggest exercises to further restore function and improve use of the limb. Structured physical rehabilitation has been shown to help speed recovery. Full recovery may take 12-16 weeks.

PROGNOSIS

- The prognosis for dogs with injury to the CCL that are treated with TPLO is very good. A high percentage (90%) of dogs will resume a normal life with full function of the limb.
- Dogs that have previously undergone other surgical repair techniques frequently are improved with the TPLO surgery, but the outcome may not be as good.
- The TPLO procedure has been shown to minimize the progression of arthritis.
- A fair number of dogs will develop damage to the opposite CCL regardless of which surgical technique is used.

Pre TPLO Surgery



Post TPLO Surgery



POTENTIAL COMPLICATIONS

- Post-operative complications are uncommon and may include:
 - 1) Infection
 - 2) Implant complication
 - 3) Injury to the meniscus
 - 4) Progression of arthritis
 - 5) Fracture of the tibial crest
- Any incisional complications should be reported to your pet's surgeon.
- If at any time during the post-operative period your dog becomes very painful or stops using his or her leg, you should contact your pet's surgeon.



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