

The Effect of a Modified Approach on Early Weight Bearing Following Tibial Plateau Leveling Osteotomy in Dogs

Purpose

To determine if a modified approach to Tibial Plateau Leveling Osteotomy (TPLO), which allows improved preservation of the muscle attachments, will lead to earlier weight bearing and faster resolution of lameness following TPLO surgery

Background

Tibial Plateau Leveling Osteotomy (TPLO) is a common procedure to address cranial cruciate ligament rupture in dogs. In order to reach the top of the tibia (shinbone) to perform the surgery, surgeons need to cut across the attachments of three muscles. These muscles have a role in flexing the stifle (knee) and may help with stability of the stifle. The purpose of this study is to see if a modified approach, which allows improved preservation of the muscle attachments, will lead to earlier weight bearing and faster resolution of lameness following TPLO surgery.

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Eligibility

- Dogs aged over 1 year of any sex or breed
- Dogs weighing between 13kg (30lb) and 55kg (120lb)
- Dogs diagnosed with unilateral cranial cruciate ligament rupture based on orthopedic examination and radiographs of the stifle.
- Dogs with radiographic evidence of orthopedic disease in other joints may enroll as long as clinical lameness is not present in other joints.
- Patients must have normal pre-anesthetic bloodwork and be able to receive non-steroidal anti-inflammatory pain medications following surgery
- Owner willingness to comply with follow-up visit schedule

Exclusion Criteria

- Dogs with clinical lameness caused by concurrent orthopedic disease in other joints.

Study Design

This is a prospective clinical trial in which eligible canine patients will be treated for cranial cruciate ligament rupture using the Kyon TPLO system. Patients will have stifle radiographs taken pre-operatively and immediately post-operatively. Gait analysis will be performed prior to surgery and one day following surgery, prior to discharge. Patients must return in 2, 6 and 12 weeks for an orthopedic exam and gait analysis. Additionally, sedated radiographs to confirm healing will be performed at 12 weeks. Clients will be asked to complete a short survey at each recheck visit. If any complications are suspected between these times, patients should be evaluated sooner and any complications recorded.

Compensation

The estimated cost for a TPLO is \$3,500-4,000 per side, which includes bloodwork, hospitalization, anesthesia, surgery, implants, and immediate post-operative radiographs. This estimate does not include unforeseen complications.

The study covers the cost of three required recheck exams at 2, 6, and 12 weeks. If all rechecks appointments are completed, 12-week recheck including sedation and associated radiographs (\$250-350 estimated value) will be covered by the study. If further radiographs are required following the 12-week recheck, or radiographs due to suspected complications are required prior to the 12-week recheck, these will not be covered by the study. Additionally, if the patient fails to return for the 2- and 6-week study time points, the owner will be responsible for the full cost of the 12-week recheck radiographs.

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