CRANIAL CRUCIATE LIGAMENT DISEASE IN LARGE BREED DOGS: FUSION TTA AS A SURGICAL TREATMENT

Carolina Fuentes Viguera
Final Degree Project
June 2019

INTRODUCTION & OBJECTIVES
This is an experimental project, more specifically, a retrospective clinical research project. Its main objective is to explain and determine the function of the Fusion Tibial Tuberosity Advancement (Fusion TTA) as well as establish a typology in relation to breed, sex and etiology and compare the results obtained with the different procedures that nowadays are available in order to solve the cranial cruciate ligament disease.

AVAILABLE SURGICAL TECHNIQUES
- Intra-articular: were the first ones created.
- Extracapsular.
- Osteotomy techniques (CTWO -Cranial Tibial Wedge Osteotomy-, TPLO - Tibial Plateau Leveling Osteotomy-, TTA and CBLO -Cora Based Leveling Osteotomy-).

DETAILED DESCRIPTION OF THE FUSION TTA
Fusion TTA technique is based on advancing the tuberosity of the tibia sufficiently for the plateau tibial to be perpendicular (90°) to the patellar ligament. When this is achieved, the tibiofemoral shear force is reduced to zero; which signifies that the patellar ligament does the function of the CCL (Mattila 2012).

RESULTS
Table 1: Lameness post ten days
Table 2: Lameness post two months

DISCUSSION
- Lafaver et al. (2007) conventional TTA. The 31.5% dogs had complications post operation. On the three month post operation visit, 23.5% of patients presented mild lameness, 2% presented moderate lameness and 1% presented severe lameness.
- MacDonald et al. (2013) conventional TTA. Patients with mild lameness but post operation complications were elevated (33.3%).
- Samoy et al. (2015) TTA RAPID. On the three month post operation visit, 56% of the dogs had an excellent outcome.
- Retallack and Daye (2018) mTTA. Lameness on the two month post operation visit was mild (0.8 out of 4). The 20% of the procedures showed tibial crest fractures and the 7.1% presented surgical site infections.
- The results obtained by the undergraduate and her tutor manifest there was a 100% excellent outcome in the patients intervened and no secondary problems.

CONCLUSIONS
Once this retrospective clinical research project is completed, and considering the reduced number of patients that were involved, the student can conclude the Fusion TTA in comparison to the other techniques available, is a safe and effective procedure to perform in cases where the cranial cruciate ligament is ruptured.

The typology of the cases manifested a predisposition of Labrador type dogs as well as female patients. Also, the limb more affected during this experimental project was the left. The second month and third month post-operation visits with the patients showed improvement of the lameness and subsequent recovery in the studied dogs.