

Comparison of Intra-and Postoperative Complications between Bilateral Simultaneous and Staged TPLO with Arthroscopy in 176 Cases

Authors:

Raz Peress, Sebastian Mejia, Marcos Unis, Giovanni Sotgiu, Simone Dore, Kenneth Bruecker

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Objective: The aim of this study was to compare the resulting short-term complications after simultaneous (SIM) or staged (ST) tibial plateau levelling osteotomy (TPLO) in patients that presented with bilaterally torn cranial cruciate ligaments.

Study design: This was a retrospective study.

Materials and methods: Medical records of dogs diagnosed with bilateral cranial cruciate ligament disease that underwent bilateral SIM or ST TPLO surgery with arthroscopy (2005-2015) were reviewed to evaluate the intra- and postoperative complications. Data were analysed and major and minor complications were compared between the two groups.

Results: A total of 176 client-owned dogs (352 stifles) that had TPLO performed bilaterally with SIM or ST procedures were included for analysis. The overall complication rate was 47.5% for the SIM group and 19.5% for the ST group. The incidence of major complications was 10.1 and 3.8% in the SIM and ST groups respectively. Minor complications were 38.4 and 15.6% in the SIM and ST groups respectively. Tibial tuberosity fractures requiring revision were noted in 2% of the SIM group and none of the ST group.

Clinical significance: Although no significant difference was noted in major complication rate or tibial tuberosity fractures in our cohort of patients, a Type II statistical error was found. The complication rate in the SIM group is numerically greater by a factor of 2-3× or more for nearly all categories. Surgeons should consider the risks and benefits of SIM versus ST procedures as well as relevant individual patient and client factors before electing either alternative.