

# Patellar Luxation & Cranial Cruciate Ligament Disease

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**Surgical stabilization using TTTA may be a safer approach for correction of concomitant CCL rupture and MPL as compared with ECS+TTT.**

## In the Literature

Fauron AH, Bruce M, James DR, Owen MA, Perry KL. Surgical stabilization of concomitant canine medial patellar luxation and cranial cruciate ligament disease. *Vet Comp Orthop Traumatol.* 2017;30(3):209-218.

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## FROM THE PAGE ...

Cranial cruciate ligament (CCL) rupture occurs commonly in combination with medial patellar luxation (MPL) in dogs, with higher MPL grades increasing the risk for CCL rupture.<sup>1</sup> Despite many surgical option combinations and studies describing these techniques, little (if any) objective clinical trial data comparing various surgical approaches exist.

This multi-institutional retrospective study compared clinical outcomes and complications following tibial tuberosity transposition-advancement (TTTA) against extracapsular stabilization and tibial tuberosity transposition (ECS+TTT) for correction of CCL rupture and/or MPL instability in dogs. A total of 72 stifles were evaluated in 66 dogs; over a 10-year period, 40 were stabilized using TTTA and 32 using ECS+TTT. Overall, complications occurred 2.7 times more often with ECS+TTT (46.9%) as compared with TTTA (17.5%). Major complications occurred only in the ECS+TTT group (5/32) and included premature implant failure, relaxation, and infection necessitating surgical revision or implant removal. Minor complications that occurred were predominantly wound-related. Dogs of greater weight were more likely to have TTTA performed over ECS+TTT; however, greater weights did not correspond with higher complication rates. Relaxation rate was

similar in both groups (TTTA, 20%; ECS+TTT, 15.6%). The performance of a femoral sulcoplasty also reduced risk for a poor outcome.

The results of this study suggest that surgical stabilization using TTTA may be a safer approach for correction of concomitant CCL rupture and MPL as compared with ECS+TTT. The overall complication rates in both groups were higher than previously reported for each individual procedure alone; this higher rate could possibly be related to case contributions from many surgeons with varying experience levels. Despite the high rate of complications, the outcome was good to excellent in most cases.

## ... TO YOUR PATIENTS

Key pearls to put into practice:

- 1 Thorough examination for CCL instability in dogs with MPL is important.
- 2 Surgical stabilization of concurrent CCL and MPL may be associated with a higher complication rate than either procedure individually.
- 3 Surgeons already proficient in tibial tuberosity advancement (TTA) may consider a combination of this approach with tibial tuberosity transposition (TTT) to be a superior option for concurrent MPL/CCL rupture; however, this combination (ie, TTTA) should only be reserved for those surgeons who have mastered the TTA technique.

## Reference

1. Campbell CA, Horstman CL, Mason DR, Evans RB. Severity of patellar luxation and frequency of concomitant cranial cruciate ligament rupture in dogs: 162 cases (2004-2007). *J Am Vet Med Assoc*. 2010;236(8):887-891.

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