Effects of postoperative rehabilitation on limb function after cranial cruciate ligament repair in dogs.

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Abstract

OBJECTIVE: To determine the effects of early postoperative rehabilitation on limb function in dogs after surgery for ruptured cranial cruciate ligament (RCCL).

DESIGN: Prospective clinical study.

ANIMALS: 51 client-owned dogs.

PROCEDURE: Dogs weighing between 20 and 40 kg (44 to 88 lb) that had RCCL and medial meniscal injury were studied. After removal of the RCCL and complete medial meniscectomy, the stifle joint was stabilized by use of a lateral retinacular stabilization technique. Twenty-five dogs were included in a postoperative rehabilitation group, and 26 dogs were included in an exercise-restricted group. Limb function (peak vertical force [PVF] and vertical impulse [VI]) was determined before surgery and 6 months after surgery, using force platform gait analysis.

RESULTS: Prior to surgery, mean PVF and VI in affected limbs were similar between groups. Six months after surgery, PVF and VI were significantly increased in dogs of both groups. However, PVF and VI in dogs in the rehabilitation group were significantly greater than those of dogs in the exercise-restricted group. At this time, differences in limb function (as measured by PVF and VI) between the repaired and normal limbs were not evident in dogs in the rehabilitation group. Conversely, limb function in the repaired limb of dogs in the exercise-restricted group was still significantly less than that of the normal limb.

CONCLUSION AND CLINICAL RELEVANCE: Dogs that have surgery for RCCL and a torn medial meniscus benefit from postoperative rehabilitation; rehabilitation should be considered part of the postoperative management of these patients.