Primary Repair of Medial Collateral Ligament Tears With Suture Augmentation

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Background

The medial collateral ligament (MCL) is considered to have superior healing and classically has been managed nonsurgically in patients with low-grade MCL injuries. MCL injury in patients with a concomitant anterior cruciate ligament (ACL) injury usually is managed via delayed surgery to allow for nonsurgical management of the MCL. Recent studies have shown that, even with grade II MCL injury, residual laxity may be present that may place greater strain on an ACL graft in the multiligamentous setting. This can be corrected via early primary repair of the MCL, which also allows for early definitive management of concurrent ipsilateral ligamentous injuries.

Indications

All patients are potential candidates given sufficient tissue quality for repair; however, this procedure is preferably performed acutely to avoid scarring, avoid quadriceps strength loss, and allow for early management of any concurrent ipsilateral ligamentous knee injury. This technique may be performed on proximal and distal MCL injuries, with the same anchor positioning in either case.

Technique

The torn superficial and deep MCL are sutured via a Bunnell-type pattern. The superficial proximal MCL is then fixed to its anatomic footprint with the use of a suture anchor preloaded with internal suture tape augmentation. A second small incision is made over the tibial insertion of the MCL, and a passing suture is channeled from the distal to proximal incision under a skin bridge to retrieve the suture tape. The suture tape is then deployed with appropriate tensioning to the anatomic distal insertion point of the superficial MCL using a second suture anchor.

Results

Currently, no published data are available on patient outcomes after MCL primary repair with suture augmentation. The preliminary unpublished data of the authors of this video on 49 patients treated via this technique and who had various concomitant ligamentous injuries showed no MCL repair failures at a mean follow-up of 1.7 years. Four patients experienced more than 10° of flexion range of motion loss, and three patients had residual valgus laxity of grade one at 0° and 30° of flexion.

Conclusion

Primary MCL repair provides a minimally invasive treatment option for medial laxity, and suture augmentation allows for early range of motion. In addition, this approach avoids delayed definitive surgical management of concomitant ligamentous injuries in patients with combined multiligamentous injuries.