

## Combined MPFL Reconstruction and Tibial Tubercle Transfer for Patellofemoral Instability

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### Summary:

The purpose of the present study is to determine the outcomes of combined medial patellofemoral ligament (MPFL) reconstruction and Tibial Tubercle Transfer for patellar instability with elevated Q angle.

### Abstract:

#### INTRODUCTION

Both medial patellofemoral ligament (MPFL) reconstruction and Tibial Tubercle Transfer (TTT) are established procedures for patients suffering from patellofemoral instability. In patients with a heightened Q angle, MPFL reconstruction performed in isolation may increase contact forces across the patellofemoral joint and not restore medial patellar tracking. The purpose of the present study is to determine the outcomes of combined MPFL and TTT for patellar instability with elevated Q angle.

#### METHODS

31 patients were identified from a surgical database as having received combined MPFL reconstruction and TTT from 2008-2010. All patients were treated by one of four fellowship trained sports medicine physicians utilizing an identical surgical technique. Minimum follow-up was 24 months for inclusion in the study. Patients were evaluated for recurrence of instability, complications, and validated functional outcome scores (Kujala/Lysholm).

#### RESULTS

Of the 31 patients (34 knees) that underwent this procedure during the time period studied, 20 patients (22 knees) met our inclusion criteria and are included in this analysis. The average length of follow-up was 39 months (range 28 to 50). There was 1 male and 19 females in this cohort with an average age of 25. The average Kujala and Lysholm scores at final follow-up were 81.09 and 75.41, respectively. One patient (5.0%) sustained a recurrence of dislocation. Three patients (13%) experienced a total of 3 complications: wound complications requiring repeat surgery (2) and stiffness requiring manipulation under anesthesia (1). There were no infections in this series. 13 patients underwent 21 subsequent surgical procedures to the affected knee: anterior compartment fasciotomy (6), lateral release (4), chondroplasty (4), removal of symptomatic hardware (3), osteophyte debridement (2), loose body removal (1), open-reduction internal fixation of a proximal tibia fracture (1).

#### CONCLUSION

MPFL reconstruction combined with tibial tubercle transfer has a high rate of success for patients presenting with patellar instability and extensor mechanism mal-alignment. The risk of recurrence with this technique was low (5.0%), and the risk of complications is equivalent to other techniques previously reported in the literature.