Editorial Commentary: Medial Patellofemoral Ligament Repair Versus Reconstruction: Still a Question or a Clear Winner?

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Abstract: Controversy persists regarding appropriate treatment of patellar instability. As surgeons move to a more aggressive approach, medial imbrication and medial patellofemoral ligament repair are waning in popularity whereas medial patellofemoral ligament reconstruction has become the standard of care. Techniques vary between surgeons, and consensus remains elusive.

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"Isolated Medial Patellofemoral Ligament Repair Versus Reconstruction: Rates and Risk Factors for Instability Recurrence in a Young, Active Patient Population" by Puzzitiello, Waterman, Agarwalla, Zuke, Verma, Cole, Yanke, and Forsythe[1] is a retrospective review comparing outcomes of medial patellofemoral ligament (MPFL) repair with those of MPFL reconstruction. This is a timely article because surgeons seem to be forgetting their orthopaedic history. The mantra of rehabilitating patients with patellar instability stemmed from inferior outcomes achieved with MPFL repair. In addition, recent articles have shown a high risk of patellofemoral arthritis with nonoperative treatment of patellar instability.[2,3] Studies have shown that lateral patellar instability patients are at risk of recurrence for up to 5 to 10 years, whereas most published studies perform 2 years' follow-up, which underestimates recurrence rates.[4] The MPFL site of injury appears multifocal, and thus, repair depends on accurate diagnosis of the location of injury. A magnetic resonance imaging study by Zhang et al.[5] looked at the site of MPFL injury in pediatric patients and concluded that isolated femoral avulsion occurred in 32%, isolated patellar avulsion occurred in 39% and ligament stretch occurred in 4%; however, in 25%, there was more than 1 site of injury. Askenberger et al.[6] also looked at injury sites of the MPFL after patellar dislocation, and although the results showed a preponderance of patellar avulsions, they found that 35% of patients had a multifocal injury. Therefore, one can reason that MPFL repair is far from a reliable option. Although some small series such as that of Dragoo et al.[7] have shown excellent outcomes with a tibial tubercle–trochlear groove distance of less than 20 mm with either a patellar or femoral avulsion, Arendt et al.[8] published a failure rate of 46% with repair alone in a fairly large cohort (55 patients). Camp et al.[9] published the Mayo Clinic experience with a failure rate of MPFL repair at 4 years of 28%. Furthermore, Bitar et al.[10,11] showed the superiority of MPFL reconstruction over MPFL repair.

In their study, Puzzitiello et al.[1] collected outcomes of 4 surgeons' experience with MPFL surgery with 32 reconstructions and 19 repairs with a 59.7-month follow-up period. Not surprisingly, their results favored MPFL reconstruction over repair. Their surgical technique varied with different fixation methods on both the patella and femur for the MPFL reconstructions, as well as various techniques for MPFL repair. Although the lack of consistency in surgical technique limits the study, it also goes to show that, as a whole, MPFL repair is less reliable than MPFL reconstruction, regardless of the specific methods used for either approach.

Puzzitiello et al.[1] once again have shown that the Kujala score does not measure recurrent instability

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because they found no significant difference in Kujala scores between the patient groups despite a 36.9% recurrence rate in the repair group and a 6.3% recurrence rate in the reconstruction group. In addition, the Kujala score was not assessed in 3 of 8 patients with failure who underwent additional surgery, severely limiting conclusions that could be drawn from this small group. Askenberger et al.[12] showed minimal difference in Kujala scores between operatively and nonoperatively treated patients despite significant differences in redislocation rates.

Finally, the study by Puzzitiello et al.[1] suggests that we may want to be more aggressive in the treatment of patellar instability in patients with patella alta. The Caton-Deschamps index averaged 1.1 in patients with successful MPFL repairs and 1.3 in patients with unsuccessful MPFL repairs. As surgical numbers grow, I look forward to larger studies with more stringent inclusion criteria. The study by Puzzitiello et al. was nonrandomized, and therefore, patients who were deemed by their surgeons to have a higher risk of redislocation may have been selected for MPFL reconstruction, thereby placing higher-risk patients in the reconstruction group. All in all, this study reaffirmed the choice of MPFL reconstruction over MPFL repair and brought forth more evidence that the Kujala score is not a measure of recurrent instability.

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