

Impact of Obesity and Age on 30-Day Postoperative Outcomes in Medial Patellofemoral Ligament Reconstruction Patients with Recurrent Patella Instability

INTRODUCTION: Poor postoperative outcomes are predicted by obesity and older age according to knee reconstruction studies. We aimed to evaluate the risks of obesity and older age on 30-day postoperative outcomes of medial patellofemoral ligament (MPFL) reconstruction surgery.

METHODS: The American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP) database was queried from 2008 to 2016 to select MPFL reconstruction with patellar instability patients. Subjects without patellar instability and with simultaneous ligamentous repair were excluded. Patients were stratified by obesity (body mass index [BMI] <30 vs. ≥ 30 kg/m²) and age (≤ 30 vs. >30 years), and postoperative outcomes, including readmission, reoperation, as well as surgical and medical complications were investigated. Logistic regression analysis determined the impact of obesity and older age on those adverse events.

RESULTS: 476 MPFL reconstructions for patellar instability were isolated (mean age 31.1 years, BMI 30.1 kg/m², 62% female, 72.9% white, mCCI 0.15). 44% had a BMI ≥ 30 kg/m² and 39% of patients were >30 years old. Mean operative time and total length of stay were 96.9 minutes and 0.8 days. Rates of complication, reoperation, and readmission were 1.9%, 0.8%, and 1.1% respectively, with no significant differences observed between BMI groups (all, $p > 0.05$). Patients >30 years old were significantly more likely to have a complication (4.4% vs 0.3%, $p=0.003$) or reoperation (2.7% vs 0% $p=0.021$). Patients >30 years old are significantly more likely to have an adverse postoperative event (OR=8.6 95% confidence interval [1.9 – 40.0], $p=0.006$).

DISCUSSION: Following MPFL reconstruction for patellar instability, BMI has no observable impact on operative outcomes, while age greater than 30 years old is a significant predictor of postoperative complication. Older patients should be counseled of these risks following MPFL reconstruction.