Prior Meniscectomy in Total Knee Arthroplasty is Associated with Worse Postoperative Functional Outcomes

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INTRODUCTION: Patients undergoing total knee arthroplasty (TKA) with prior meniscectomy have increased rates of postoperative infection, arthrofibrosis, and revision. However, it remains unclear whether prior meniscectomy impacts functional outcomes after TKA. This study was conducted to compare the functional outcomes following TKA in patients with and without prior meniscectomy. We hypothesized that patients with prior meniscectomy would have worse functional outcomes.

METHODS: A retrospective matched case-control study was conducted at a tertiary academic center. Patients who underwent both meniscectomy and TKA (cases) or TKA alone (controls) from 2013 – 2020 were identified from our institutional database using current procedural terminology codes. Cases were matched in a 1:3 ratio to controls using age, sex, race, body mass index, and Charlson Comorbidity Index. Inclusion criteria comprised a minimum of one-year follow-up for the Knee Injury and Osteoarthritis Outcome Score Junior (KOOS Jr). Exclusion criteria included patients undergoing revision TKA and patients with a history of ligamentous knee surgery or fracture. T-tests and Chi-squared analyses were conducted, with significance being $p < 0.05$.

RESULTS: 589 cases and 1,767 controls were included after matching. There were no significant differences in demographic variables. Cases underwent TKA after their meniscectomy at a mean of 2.9 years. While no significant difference existed for preoperative KOOS Jr. scores (46.4 vs. 46.4; $p = 0.984$), postoperative KOOS Jr. scores were significantly lower in the case group (71.9 vs. 75.3; $p = 0.001$). The case group also achieved the minimal clinically important difference (MCID) and patient acceptable symptom state (PASS) at significantly lower rates than the control group [(MCID: 71.0% vs. 77.3%; $p = 0.011$); (PASS: 69.4% vs. 76.7%; $p = 0.001$)].

DISCUSSION AND CONCLUSION: Patients with prior meniscectomy may experience lower postoperative functional outcome scores after TKA and have a lower rate of achieving the MCID and PASS. Patient expectations should be tailored accordingly.