

# Paper #3

## Prior Knee Arthroscopy Increases the Failure Rate of Subsequent Unicompartmental Knee Arthroplasty

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**Introduction:** In selected patients with early knee osteoarthritis, knee arthroscopy may be performed to delay arthroplasty, treat symptomatic mechanical pathology, and assess the knee compartments. The purpose of this study was to determine if knee arthroscopy within two years prior to UKA is associated with an increased rate of UKA failure.

**Methods:** Data from 2007-2017 was collected from a large national database. Patients who underwent knee arthroscopy within two years prior to UKA were identified and propensity matched with controls based on age, sex, Charlson Comorbidity Index, smoking status, and obesity. Rates of failure for various causes, as well as rates of conversion to TKA, were compared between cohorts.

**Results:** Prior to propensity matching, 8,353 patients underwent UKA and met criteria for inclusion. Of these, 1,112 patients (13.3%) underwent knee arthroscopy within two years prior to UKA. Following propensity matching, 2,158 patients were included. Among these, 1,079 (50.0%) patients had knee arthroscopy within two years prior to UKA and 1,079 (50.0%) did not. All subjects were successfully matched, and no differences existed among cohorts. The knee arthroscopy cohort was significantly more likely to require conversion to TKA within two years of UKA when compared to the control cohort (10.4% vs. 4.9%;  $p < 0.001$ ). In addition, the knee arthroscopy cohort was significantly more likely to experience aseptic loosening relative to the control cohort (2.4% vs. 1.1%;  $p = 0.044$ ).

**Conclusions:** Knee arthroscopy within two years prior to UKA is associated with significant increases in subsequent conversion of UKA to TKA and revision of UKA due to aseptic loosening. Clinicians should be mindful of these risks when electing to perform knee arthroscopy in patients who may be indicated for future UKA. Additionally, patients who have undergone prior arthroscopy and are indicated for UKA should be counseled that they may be at increased risk for failure following arthroplasty.

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