

Arthroscopy Within 3 Months Prior to Unicompartmental Knee Arthroplasty is Associated with Increased Rate of Prosthetic Joint Infection

Abstract

Introduction: Arthroscopy remains a commonly performed procedure in patients with meniscal or other osteochondral pathology prior to ultimately being indicated for unicompartmental knee arthroplasty (UKA). The purpose of this study was to examine the timing of knee arthroscopy prior to UKA and its association with 2-year Prosthetic Joint infection (PJI) rates and medical and surgical complications.

Methods: Patients undergoing UKA with history of ipsilateral arthroscopy within 2 years prior to the UKA were identified in the PearlDiver database. A control cohort of propensity matched patients without a history of arthroscopy was identified. Study cohorts were established based on timing of the arthroscopic procedure: 0-3, 3-6, 6-12 and 12-24 months prior to UKA. Patients were included if they had 2-year post-operative follow-up after UKA. The 90-day rates of post-operative medical and 2-year surgical complications were recorded. Multivariate analysis was conducted to account for confounding variables and covariates.

Results: A final cohort of 3,471 patients met inclusion criteria. There were no differences in complication rates for patients undergoing UKA with prior ipsilateral arthroscopy compared to the control. Patients undergoing UKA within 3 months of the arthroscopic procedure demonstrated a higher incidence of PJI when compared to the control cohort (3.30% vs. 1.12%, $P=0.012$). Additionally, there was an increased rate of periprosthetic fracture observed in those

undergoing UKA within 3 months of arthroscopy when compared to the control (1.10% vs. 0.20%, $P=0.010$).

Conclusion: Patients undergoing ipsilateral arthroscopy within 3 months of a UKA demonstrated a nearly three-fold increased incidence of PJI when compared to the control. There was no increased incidence of PJI when UKA was staged greater than 3 months after arthroscopy. These findings provide insight for preoperative considerations for arthroplasty surgeons in this patient population.