UKA to UKA Revisions are 6x More Likely to Fail than UKA to TKA Conversions

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INTRODUCTION:

Previous studies report high failure rates when a unicompartmental arthroplasty (UKA) is revised to another UKA. There are, however, certain indications, such as liner failure or periprosthetic joint infection (PJI), where UKA to UKA revision may be considered. The purpose of this study was to compare survivorship and failure rates in patients undergoing UKA to UKA revisions and UKA to TKA conversions for various indications. METHODS:

We reviewed 230 UKA patients (241 knees) revised to UKA (n=24) or converted to TKA (n=217) from 1995 – 2022. Mean time to revision from the index UKA was 6 years. Mean age was 65 years, 47% were female, and mean BMI was 31 kg/m². Indications for conversion to TKA included aseptic loosening (37%), progression of osteoarthritis in adjacent compartments (34%), and unexplained pain (21%). The indications for UKA to UKA revision included PJI (71%), instability (12%), and aseptic loosening (12%). Kaplan-Meier survivorship analyses were performed for revisions and reoperations and compared between groups.

RESULTS:

The 2-year survivorship free of any revision for patients converted to TKA was 96% compared to 78% in UKA-to-UKA revisions (p=0.0023). The 2-year survivorship free of any reoperation for UKA to TKA conversions was 92% compared to 63% in UKA-to-UKA revisions (p=0.0002). Of the UKA-to-UKA revisions for instability, 67% required re-revision. Similarly, of the UKA-to-UKA revisions for aseptic loosening and prosthetic joint infection (PJI), 33% and 18% required re-revision, respectively. Of the patients who underwent re-revision in the UKA-to-UKA subgroup, 80% were converted into TKA. DISCUSSION AND CONCLUSION:

The 2-year failure rate was 5.5 times higher for UKAs revised to UKA compared to UKA converted to TKA. Surgeons should be aware of the high failure rate when counseling patients when presenting with complications where UKA retention seems to be an option.





Kaplan-Meier curve showing survivorship free of any revision for patients converted to TKA compared to patients revised to another UKA (R-UKA)