Patellar Resurfacing in Primary TKA: Improved 15-Year Outcomes in Over 25,000 Cases

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INTRODUCTION: Patellar resurfacing in primary total knee arthroplasty (TKA) remains controversial. This study evaluated implant survivorship, patella-related reoperations and clinical outcomes in patients who underwent primary TKA with or without patellar resurfacing in a large series from a single, high-volume, academic institution with very close and long-term follow up.

METHODS:

We reviewed 25,654 primary TKAs performed between 2000 and 2022 at a single institution, including 22,493 with resurfaced patellae and 3,161 without. Patellar resurfacing was performed at the surgeon's discretion. A lateral facetectomy was performed in 69% of unresurfaced patellae. Mean age was 68 years, mean BMI was 33 kg/m^2, and 56% were female. Mean follow-up was 7 years.

RESULTS: The 15-year survivorship free of patella-related revision was 99% in TKAs with resurfaced patellae and 97% in TKAs without. The 15-year survivorship free of patella-related reoperation was 98% in TKAs with resurfaced patellae compared to 96% in TKAs without. TKAs with unresurfaced patellae had a sixfold higher risk of patella-related revision ($p<0.01$) and twofold higher risk of patella-related reoperation ($p<0.01$). Secondary resurfacing was performed in 51 cases (1.6%) in the unresurfaced group. The 15-year survivorship free of any revision and any reoperation was 93% and 87% in the resurfaced group, and 92% and 88% in the unresurfaced group. TKAs with unresurfaced patellae had a twofold increased risk of any revision ($p<0.01$). Lateral facetectomy, denervation, osteophyte removal, and lateral release did not reduce patella-related reoperation or revision risk. At 10 years, Knee Society Function scores were significantly higher in the resurfaced group (76 v. 68; $p<0.01$).

DISCUSSION AND CONCLUSION:

In this series of 25,000 primary TKAs, patellar resurfacing was associated with improved survivorship free of patella-related revision and reoperation, as well as improved long-term clinical outcomes. Lateral facetectomy, denervation, osteophyte removal and lateral release were not protective against patella-related revision in unresurfaced patellae.