

Does Medial Patellofemoral Osteoarthritis Influence Outcome Scores and Risk of Revision after Medial Fixed-bearing Unicompartmental Knee Arthroplasty?

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Abstract

BACKGROUND: Patellofemoral osteoarthritis (OA) and anterior knee pain sometimes are considered contraindications for unicompartmental knee arthroplasty (UKA). However, several studies have demonstrated excellent patient-reported outcome scores in patients with patellofemoral OA treated with medial mobile-bearing UKA. Because these studies assessed the outcome of mobile-bearing UKA or were interested to see whether that finding also applies to fixed-bearing medial UKA.

QUESTIONS/PURPOSES: (1) Does patellofemoral OA influence patient-reported outcome scores after medial fixed-bearing UKA? (2) Does untreated medial patellofemoral OA increase the revision rate after medial fixed-bearing UKA?

METHODS: Between 2008 and 2015, one surgeon performed 308 medial fixed-bearing UKAs of a single design. Of those, 80 (26%) had patellofemoral OA of at least moderate severity (ICRS III or IV), and 228 (74%) did not. During that period, the surgeon did not use patellofemoral OA as a contraindication to UKA. In all, 13 patients (10%) in the patellofemoral OA group were lost before 2-year minimum followup, and 20 (11%) in the control group (without patellofemoral OA) were lost; all other patients were available, seen in the last 5 years, and included in this retrospective study. Mean ($\pm$ SD) followup in the patellofemoral OA group was 39 ± 25 months, and it was 41 ± 22 months in the control group. There were 100 women and 120 men. Patients had a mean age $\pm$ SD of 65 ± 10 years and mean $\pm$ SD BMI of 29 ± 4 kg/m². The intraoperative status of the patellofemoral joint was assessed using the International Cartilage Repair Society (ICRS) classification. The primary study endpoint was the Forgotten Joint Score (FJS-12); we also compared scores on the Lonner PatelloFemoral Score, Oxford Knee Score (OKS) and Short-Form 12 (SF-12). With the numbers available, we had 80% power to detect a difference of 12.3 points on the Forgotten Joint Score. A secondary endpoint was femoral or tibial component revision for any reason verified over the phone for each included patient.

RESULTS: With the numbers available, there was no difference in FJS-12 score between the UKA with patellofemoral OA group and the group without patellofemoral OA (71 ± 29 versus 77 ± 26 , mean difference - 6; 95% CI, -16 to 4.5; $p = 0.270$). Likewise, with the numbers available, we saw no differences in LPFS, OKS and SF-12. There was no difference in survivorship from all-cause revision at 4 years between the patellofemoral OA group and the group without patellofemoral OA (98%; 95% CI, 85.8-99.7 versus 99.5%; 95% CI, 96.6-100.0; $p = 0.352$).

CONCLUSIONS: Patients with medial osteoarthritis in this single-center study generally benefitted from medial fixed-bearing UKA with good to-excellent outcomes scores at short term, whether or not medial patellofemoral wear is present.

LEVEL OF EVIDENCE: Level III, therapeutic study.

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