Resurfacing the Thin Native Patella: Is It Safe?

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INTRODUCTION:
Whether to resurface the patella during total knee arthroplasty (TKA) remains debated. One often cited reason for not resurfacing is inadequate patellar thickness. However, when left unresurfaced, this cohort has known relatively high revision rates. The aim of this study is to describe the implant survivorships, reoperations, complications, and clinical outcomes in patients who underwent patellar resurfacing of a thin native patella.
METHODS: Our institutional total joint registry was used to identify patients undergoing primary TKA with patellar resurfacing from 2000 to 2010. Of the 11,333 identified patients, 200 (1.8%) had a preresection patellar thickness of ≤19mm. Preresection and postresection patella thickness was measured intraoperatively using calipers. Median preresection and postresection thickness was 19 (range 12-19) and 12.5 (range 10-17), respectively. Mean age was 69 years, mean BMI 31 kg/m^2, and 93% were female. Indications for surgery included: osteoarthritis (n=153), rheumatoid arthritis (n=33), posttraumatic arthritis (n=14). Median follow up was 10 years (range 2-20).
RESULTS: At 10 years, survivorships free of any patella revision, patella-related reoperation, periprosthetic patella fracture, and patella-related complication were 98%, 98%, 99%, and 97%, respectively. There were 2 patella revisions: 1 for aseptic loosening and 1 for PJI. There were 2 additional patella-related reoperations, both arthroscopic synovectomies for patellar clunk. Two patients underwent MUA. There were 3 periprosthetic patella fractures managed nonoperatively, all with well-fixed components and intact extensor mechanisms. Radiographically, the patella appeared well fixed in all nonrevised knees. Knee society scores improved from mean 36 preoperatively to mean 81 at 10-years postoperatively.
DISCUSSION AND CONCLUSION: Resurfacing the thin native patella was associated with high survivorship free of patellar revision at 10-year follow up. None-the-less there was one case of patellar loosening and 3 periprosthetic patella fractures. These risks must be weighed against the known higher incidence of revision when the thin native patella is left unresurfaced.