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ABSTRACT TITLE: Effect of Patellar Resurfacing on Clinical Outcomes in Total Knee Arthroplasty Using Ultracongruent Inserts

INTRODUCTION

Previous research has reported increased patellofemoral (PF) pressure following total knee arthroplasty (TKA) with the use of an ultracongruent (UC) polyethylene tibial insert. Resurfacing the patella, also shown to increase PF stress, with an UC insert may result in detrimental clinical outcomes caused by significant PF pressure, especially during knee flexion. Therefore, the purpose of this study was to compare clinical outcomes following UC TKA between patients with a resurfaced or non-resurfaced patella.

METHODS

In this prospective study of 80 patients (102 knees) with a minimum six-month follow up, UC TKA with patella resurfacing (34 patients, 43 knees) were compared to UC TKA without patella resurfacing (46 patients, 59 knees). The determination for patella resurfacing was made based on the last digit of the medical record number being even or odd. Knee flexion and clinical outcome scores were collected preoperatively and at six weeks and six months postoperatively.

RESULTS

At six-weeks postoperatively, unresurfaced patellae had higher Knee Society (KSS) Function ($P=0.046$) and Knee Osteoarthritis Outcome Score, Joint Replacement (KOOS JR) scores ($P=0.038$), but there was no difference in other outcome scores. More patients with unresurfaced patellae had knee flexion $<100^\circ$ at six weeks postoperatively ($P=0.006$) but the need for knee manipulation at six weeks did not reach statistical significance ($P=0.077$). Patella resurfacing did not influence six-month knee flexion, clinical outcome scores, nor patient satisfaction.

CONCLUSION

Resurfacing the patella in a TKA with UC insert does not result in poor clinical outcomes that would have been predicted by prior cadaver studies.