Are Morbidly Obese Patients Appropriate for TKA with Selective Patella Resurfacing?

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A resurgence in selective patella resurfacing in primary total knee arthroplasty (TKA) has occurred due to modern patellafriendly implants, awareness that historical studies are confounded and the catastrophic nature of patella resurfacing complications. Patient selection remains anecdotal with limited data, particularly in obese patients who have the largest stress across the patellofemoral articulation. This study compared patient reported outcomes (PROMs) for patients with BMI \geq 40 who underwent contemporary TKA with and without selective patellar resurfacing. METHODS:

2,308 primary TKAs were retrospectively reviewed. All TKAs were performed with contemporary standardized perioperative and surgical protocols, computer navigation and modern patella-friendly TKA implants. Patient demographics and covariates were extracted from the electronic health record. PROMs including UCLA Activity Level, KOOS-JR, components of the Knee Society Score (KSS), and satisfaction were evaluated preoperatively and at latest follow-up with a significance level of 0.05.

RESULTS:

515 TKA patients had a BMI \geq 40. 210 and 305 had a selectively unresurfaced or resurfaced patella, respectively. Mean follow up was 3.0 years (range, 1-13). The two groups did not differ by demographics ($P \geq 0.067$) with numbers available. Postoperatively, UCLA Activity Level was higher for the unresurfaced-patella patients compared to the resurfaced-patella patients (6.0 versus 5.2, P = 0.011). The unresurfaced-patella group had greater improvement in KSS pain with climbing stairs compared to the resurfaced-patella group (P = 0.015) in multivariate analysis. The resurfaced-patella patients reported higher satisfaction (94 versus 83%, P = 0.002), but no other outcome scores differed between groups ($P \geq 0.103$) with numbers available.

DISCUSSION AND CONCLUSION:

Patients with BMI ≥40 improve in function and patient-reported outcomes after primary TKA; however, patients with an unresurfaced patella may achieve higher activity levels and greater improvement in pain with stair climbing, where stress through the patella is the highest. This functional improvement may potentially be offset by a 10% difference in satisfaction. Further longer-term follow remains warranted.