

Paper #21

90-Day Costs, Reoperations and Readmissions for Primary Total Knee Arthroplasty Patients of Varying BMI Levels

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Introduction: The purpose of this study is to compare 90-day costs and outcomes for primary total knee arthroplasty (TKA) patients between a non-obese (BMI 18.5-24.9) versus overweight (25-29.9), obese (30-34.9), severely-obese (35-39.9), morbidly-obese (40-44.9), and super-obese (50+) cohorts.

Methods: We conducted a retrospective review of an institutional database of primary TKA patients from 2006-2013, including patients with a minimum of three-year follow-up. Sixty-five super-obese patients were identified, and five other cohorts were randomly selected in a 2:1 ratio (total n = 715). Demographics, 90-day outcomes (costs, reoperations, and readmissions), and outcomes after three years (revisions and change scores for SF12, KSS, and WOMAC) were collected. Costs were determined using unit costs from our institutional administrative data for in-hospital resource utilization. Comparisons between the non-obese and other groups were made with Kruskal-Wallis tests for non-normal data and chi-square and Fisher's exact test for categorical data.

Results: The 90-day costs in the morbidly-obese (\$11,568±1,960 mean±standard deviation, p <0.01) and super-obese (\$14,021±7,903, p <0.01) cohorts were statistically significantly greater than the non-obese cohorts (\$10,262±2,545). Only the super-obese cohort had statistically greater 90-day reoperation rates than the non-obese cohort (9.2% vs 2.3%, p =0.03). There was no difference in 90-day readmission rates. The septic revisions after 3 years were greater in the super-obese cohort compared to the non-obese cohort 6.2% vs 0.8% (p = 0.04). There were no other statistical differences between the other cohorts with the non-obese cohort at 90-days or after 3 years. Improvements in KSS and SF12 were comparable in all cohorts. The super-obese had a greater improvement in WOMAC scores than the non-obese (38 vs 26, p<0.01).

Conclusion: Policy changes may place super-obese patients at risk of losing arthroplasty care due to greater risks and costs compared to non-obese patients, but also lose access to comparable or better quality-of-life improvements.

Notes
