Paper #9

Morbid Obesity: A Significant Risk Factor for Failure following Aseptic Revision TKA

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Introduction: Obese patients are known to have a higher risk of complications following primary total knee arthroplasty (TKA). However, there is a paucity of data on the effects of obesity in revision TKA.

Questions/Purposes: The aims of this study were to assess the incidence and risk factors for subsequent revision, reoperation, and periprosthetic joint infection in morbidly obese (BMI ≥ 40 kg/m2) patients who underwent a first-time revision TKA for aseptic reasons, compared to a matched cohort of non-obese patients (BMI <30 kg/m2).

Methods: We analyzed all patients undergoing both-component aseptic revision TKA at a single institution over a 15-year period (1992-2007) with minimum follow-up of five years. All patients with a BMI ≥40 were identified (n=93, average follow-up 7.9 years), and compared to a cohort of non-obese (BMI ≤30) patients (n=93, average follow-up 7.3 years) matched by sex, age (+/- 3 years), and date of surgery (+/- 1 year). Medical records were examined for details regarding implant failure and clinical outcome scores.

Results: Overall, the morbidly obese patients had a statistically significant increased risk for re-revision surgery (HR 3.8 (1.2-16.5), p<0.02), prosthetic joint infection (HR 6.4 (1.2-119.7), p<0.03), and reoperation (HR 2.9 (1.3-7.4), p<0.02). Implant survival rates were 96% (92-100%) and 100% at five years and 81% (70-92%) and 93% (86-100%) at ten years for the morbidly obese and non-obese patients, respectively. Knee Society pain and function scores significantly improved postoperatively for both groups, but were higher in the non-obese patients at all time points.

Conclusion: Morbid obesity is associated with significantly increased rates of re-revision, reoperation, and prosthetic joint infection following aseptic revision TKA. The poorer outcomes in morbidly obese patients argue for increased attention to weight management strategies throughout the timeline of treatment for knee arthritis.