



Prophylactic Tibial Stem Fixation in the Obese: Comparative Early Results in Primary Total Knee Arthroplasty

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Introduction

Obesity is a risk factor for aseptic loosening after total knee arthroplasty (TKA). The prophylactic use of a tibial stem may enhance proximal tibia fixation in obese patients. Our aim was to review whether a tibial stem extension decreases early rates of failure in obese patients.

Methods

This retrospective cohort study included 178 consecutive primary TKAs (143 patients) with a body mass index (BMI) ≥ 35 kg/m². Fifty TKAs (42 patients) were performed with the use of a 30mm tibial stem extension, and 128 TKAs (101 patients) were performed with a standard tibial component alone. Patients with two year clinical follow up were included. The primary outcome was revision for aseptic loosening. Secondary outcomes were all-cause revision and radiolucent lines (RLL).

Results

The average follow up was 34 months (range, 24-46 months). No failures for aseptic loosening

occurred, and the occurrence of secondary procedures was not significantly different between groups. Quantification of RLL found no difference between groups.

Conclusion

In this small sample size at early follow-up, no difference was measured in revision rates, need for subsequent procedures, or quantity of RLL between groups. While the results call into question the effectiveness of tibial stems in improving tibial fixation in TKA, longer-term data is needed to determine whether the use of tibial stems improves fixation in obese patients.

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