Short-term results of a hybrid total ankle arthroplasty combining a stemmed intramedullary tibial component with chamfer-cut talar dome

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Abstract

Purpose: Total ankle arthroplasty (TAA) remains a viable alternative to ankle arthrodesis. The latest generation of TAA implant designs emphasize minimal bone resection and anatomic preservation. We have previously described our adapted technique combining an intramedullary tibial component with a minimal resection chamfer-cut talar component. The purpose of the present study is to report our short-term clinical outcomes with this hybrid technique.

Procedure: We performed a retrospective case series of consecutive patients undergoing primary TAA using this hybrid implant with a minimum of two-years follow up. Primary outcomes included the Visual Analog Pain Scale (VAS) and the American Orthopedic Foot and Ankle Society (AOFAS) Ankle-Hindfoot Scale. Secondary outcomes included rates of associated complications, reoperations, and revisions.

Results: Thirty-three consecutive patients (42% male, average age 59 years) met the inclusion criteria with an average follow up of 36 months. VAS improved from 7.1 preoperatively to 1.1 postoperatively (p<0.0001). Similarly, AOFAS scores improved from 42.2 preoperatively to 90.7 postoperatively (p<0.0001). Fifteen patients had a postoperative complication (45%), with 13 requiring a reoperation (39%), and 1 requiring a revision (3%).

Discussion: We found statistically significant improvement in patient-reported outcomes postoperatively with the majority of our complications being low-grade. At an average follow up of 3 years, implant survivorship was 97%. We demonstrate overall positive short-term clinical and radiographic outcomes of a novel hybrid TAA technique combining an intramedullary tibial component and a chamfer-cut talar component.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Supplementary materials

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