Age-Related Outcome of Mobile-Bearing Total Ankle Replacement
Camilla Maccario, MD, Ettore Vulcano, MD, Cristian Indino, MD, Luigi Manzi, MD, Federico Giuseppe Usuelli, MD

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Introduction/Purpose: Total ankle replacement (TAR) is becoming increasingly popular amongst patients with end-stage ankle arthritis. This is in part related to the advances in design, technology, and technique that have improved TAR longevity. The ideal candidate for a TAR is not fully clear. For a long time patients over age 50 years, body mass index (BMI) under 30 kg/m², and with low functional demands represented selection criteria for many patients. However, these criteria were based off a very limited number of scientific studies on older TAR designs. The aim of this study is to investigate clinical and radiographic outcome in patients of 50 years or less versus patients over 50 years undergoing a Hintegra® total ankle replacement (Integra, Plainsboro, NJ).

Methods: This study includes 70 consecutive patients who underwent primary TAR from May 2011 to April 2014. The cohort was divided into 2 groups: the young group (YG) with age less than or equal to 50 years, and the older group (OG) with age above 50 years. Patients were assessed clinically and radiologically preoperatively and at 6, 12 and 24 months postoperatively.

Results: A significant increase in the AOFAS and SF-12 and decrease in VAS scores was seen in both groups between preoperative and final followup (p < 0.001). There was a statistically significant difference between the YG and OG for the AOFAS score at final follow-up. The YG had significantly greater improvement compared to the OG (p = 0.046). In addition radiographic results showed no statistically significant difference in the coronal and sagittal alignment between the 2 groups. The mean postoperative angles in either study group demonstrated significant improvements compared to the preoperative alignment.

Conclusion: This study demonstrates that total ankle arthroplasty is an effective short-term treatment for young, active patients with symptomatic end-stage ankle arthritis. Our findings are in disagreement with the widespread theory that ankle replacement is a more reliable treatment in the elderly.