1:37 pm – 1:42 pm

**Comparison of Perioperative Complications and Hospitalization Outcomes after Ankle Arthrodesis versus Total Ankle Arthroplasty from 2002-2011**

*Oliver Schipper, MD (Chicago, Illinois)*

Jimmy Jiang, MD; Lan Chen, MD; Brian C. Toolan, MD

**Background**

The aim of this study was to analyze a validated, nationally representative admissions database in order to compare perioperative complications and hospitalization outcomes associated with ankle arthrodesis (AAD) versus ankle arthroplasty (TAA).

**Methods**

Using the Nationwide Inpatient Sample (NIS) database from 2002-2011, 12,250 patients who underwent AAD and 3,002 patients who underwent TAA were identified based on International Classification of Diseases, Ninth Revision (ICD-9) codes. The demographics, comorbidities, and perioperative outcomes during the index hospital stay were compared between patients that underwent AAD and patients that underwent TAA. Multivariate analysis was performed to adjust for differences in demographics and comorbidities between the two groups.

**Results**

Multivariate analysis demonstrated that TAA was independently associated with a decreased risk of blood transfusion (relative risk (RR)=0.53, p<0.001), non-home discharge (RR=0.70, p<0.001), and overall complication (RR=0.79, p=0.03). There were similar rates of pneumonia, deep vein thrombosis, pulmonary embolus, cerebrovascular accident, myocardial infarction, and mortality. TAA was also independently associated with a significantly higher hospital charge (difference=$24,431, p<0.001). There was no significant difference in the adjusted length of stay between the two groups (p=0.13).

**Conclusion**

TAA was independently associated with a lower risk of blood transfusion, non-home discharge, and overall complication when compared to AAD during the index hospitalization period. TAA was also independently associated with a higher hospitalization charge, but length of stay was similar between the two groups. Until long-term comparative studies are performed, the optimal treatment for end-stage ankle arthritis remains controversial, but this study provides greater clarity with regard to hospitalization outcomes between the two procedures and shows no significant difference in risk for the majority of medical perioperative complications.