Mid-term (5-10 year) Results of the Salto Talaris Total Ankle Arthroplasty
Matthew Stewart, MD, James DeOrio, MD, Samuel Adams, MD, Mark Easley, MD, James Nunley, MD

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Introduction/Purpose: The Salto Talaris total ankle replacement is a modern fixed-bearing implant used to treat symptomatic ankle arthritis with the goals of providing pain relief, restoring mechanical alignment, and allowing motion of the ankle joint. This prosthesis has been used in the United States increasingly over the last 10 years, primarily for older patients with end-stage ankle arthritis but indications are expanding to younger and more active patients. The goal of this study is to report the midterm clinical results of one of the largest cohort of patients in the United States who underwent ankle replacement with this prosthesis.

Methods: This is a review of patients with a minimum of 5-year up to 10-year follow-up who were prospectively registered within our institutional database prior to proceeding with total ankle arthroplasty using the Salto Talaris prosthesis. Follow-up examinations were scheduled annually after the one-year postoperative mark to evaluate patients both clinically and radiographically. At each annual assessment, patients rated their current level of pain using the visual analog score (VAS) and reported their functional level using the American Orthopaedic Foot and Ankle (AOFAS) ankle-hindfoot scores, the Short Musculoskeletal Function Assessment (SMFA), and the Short Form-36 (SF-36) Health survey. These scores were analyzed to assess differences between their levels preoperatively, one year postoperatively and at their most recent follow-up. Preoperative and postoperative radiographs were reviewed for component loosening. Criteria for failure was defined as undergoing revision requiring exchange or removal of the metallic components for any reason.

Results: We identified 106 patients who had a Salto Talaris total ankle replacement between March 2007 and February 2012. Of these, 72 patients (mean age, 61.9 years) met the requirement for a minimum follow-up of 5 years (range 60 to 115 months, mean 81.1 months). Average outcome in the VAS was 7.1 at one year post-op and 11.7 at last follow-up (preop: 70.0). Significant improvements were seen in the SMFA, AOFAS ankle-hindfoot score, and the SF-36 from preoperatively to their final follow-up. Survivorship was 97.2% with two patients undergoing revision arthroplasty for aseptic loosening and a third patient scheduled for revision for a chronic wound infection. 14 patients (19%) with midterm follow-up required a total of 17 additional surgical procedures on the ipsilateral ankle or hindfoot.

Conclusion: Patients who underwent total ankle arthroplasty with the Salto Talaris prosthesis have continued to show significant improvements in pain and functional outcomes at mid-term follow-up. This has shown to be an effective treatment option with durable results for patients with end-stage ankle arthritis.