

Conversion of Ankle Fusions to Ankle Replacements

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Introduction/Purpose: Ankle arthrodesis remains a prominent treatment choice for ankle arthritis in a majority of patients. Long term studies have shown a compensatory development of ipsilateral adjacent joint arthritis after ankle arthrodesis, and some patients who receive an ankle arthrodesis develop pain in surrounding joints, or even at the fusion site. As total ankle arthroplasty (TAA) design, instrumentation, and techniques have improved, the use of total ankle arthroplasty has become more widespread. Very few studies have been published on conversion of ankle arthrodesis to ankle arthroplasty, but they have shown improved function and patient-related outcome scores. The purpose of this study was to assess the radiographic, clinical, and patient-reported outcomes of patients undergoing ankle arthroplasty after conversion from a CT-confirmed anklearthrodesis.

Methods: This was a retrospective cohort study of patients with previous CT-confirmed ankle arthrodesis who underwent conversion to total ankle arthroplasty. Minimum follow up was 1 year. Nonunions of ankle arthrodesis were excluded. AOFAS ankle-hindfoot score, foot function index (FFI), pain, revision surgeries, complications, and patient demographics were assessed. Radiographs prior to TAA, and at latest follow-up were also reviewed.

Results: 10 patients were included in the study with an average age of 54.5 years. No implants had to be revised. 1/10 (10%) patients had to undergo secondary surgery for heterotopic ossification removal. The same patient had to undergo another subsequent surgery for posterior ankle decompression. 2/10 (20%) patients had a mild talar subsidence of the TAA at latest follow-up, with no patients having tibial subsidence. Talar osteolysis was noticed in 2 patients (20%) at latest follow-up, with no patients having tibial osteolysis. Only one patient (10%) was noted to have a mild valgus alignment of TAA with no varus malalignments. All radiographic changes noted were clinically asymptomatic. The average AOFAS total score was 58 (range 23,89). The mean FFI total score was 41.9 (range 0,90).

Conclusion: Conversion of ankle fusion to TAA is a challenging operation but can be a viable option for patients with ongoing pain after an ankle arthrodesis. We noted low revision rates and few complications at 1 year.

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