

## Documents

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### Subtalar Arthrodesis in Patients With Prior Tibiotalar Arthrodesis for Posttraumatic Osteoarthritis

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#### Abstract

**Background:** The tibiotalar arthrodesis for end-stage ankle osteoarthritis is a surgical procedure that leads to a modification of the kinematics of the adjacent joints and may result in the development of secondary osteoarthritic degeneration of the subtalar joint. It has previously been observed that subtalar arthrodesis in this context shows a lower fusion rate than isolated subtalar arthrodesis. This retrospective study reports the results of subtalar joint arthrodesis with previous ipsilateral tibiotalar arthrodesis and suggests some factors that may compromise the fusion of the joint. **Methods:** Between September 2010 and October 2021, 15 arthrodeses of the subtalar joint with screw fixation were performed in 14 patients, with a fusion of the ipsilateral tibiotalar joint. Fourteen of 15 cases used an open sinus tarsi approach, 13 were augmented with iliac crest bone graft, and 11 had supplemental demineralized bone matrix (DBM). The outcome variables were fusion rate, time to fusion, and revision rate. Fusion was assessed by radiographs and computed tomography scan. **Results:** Twelve of the 15 subtalar arthrodeses (80%) fused at the first attempt with an average fusion time of 4.7 months. **Conclusion:** In this limited retrospective case series, compared to the fusion rate of isolated subtalar arthrodesis reported in the literature, the rate of subtalar fusion in the presence of an ipsilateral tibiotalar arthrodesis was found to be lower. **Level of Evidence:** Level IV, retrospective case series. © The Author(s) 2023.

#### Author Keywords

fusion; subtalar arthrodesis; tibiotalar arthrodesis

#### Index Keywords

corticosteroid; adult, ankle replacement, arthroscopy, Article, bone graft, bone matrix, clinical article, computer assisted tomography, female, follow up, fusion rate, human, iliac crest bone graft, joint radiography, male, musculoskeletal disease, musculoskeletal system parameters, open sinus tars approach, osteotomy, posttraumatic osteoarthritis, retrospective study, subtalar arthrodesis, supplemental demineralized bone matrix, surgical technique, talocrural joint, tibia fracture, tibiotalar arthrodesis, time to fusion, wedge resection, ankle, arthrodesis, osteoarthritis, procedures, subtalar joint, treatment outcome; Ankle Joint, Arthrodesis, Humans, Osteoarthritis, Retrospective Studies, Subtalar Joint, Treatment Outcome

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