

Publication

Anterior double plating for rigid fixation of isolated tibiotalar arthrodesis

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)**ID** 1194376**Author(s)** Plaass, Christian; Knupp, Markus; Barg, Alexej; Hintermann, Beat**Author(s) at UniBasel** [Hintermann, Beat](#) ;**Year** 2009**Title** Anterior double plating for rigid fixation of isolated tibiotalar arthrodesis**Journal** Foot and ankle international**Volume** 30**Number** 7**Pages / Article-Number** 631-9**Keywords** Anterior, Plating, Tibiotalar, Ankle Arthrodesis, Plate Fixation, Ankle Osteoarthritis, Failed Ankle Prosthesis, Failed Ankle Arthrodesis

BACKGROUND: Arthrodesis is the most common procedure used to treat end-stage osteoarthritis of the ankle, particularly in patients with difficult conditions such as poor bone quality. While many techniques are available to fuse the ankle, current recommendations favor the use of internal fixation with screws and/or plates. Despite of progress, the complication rate remains a major concern. Non-union is one difficult problem especially with difficult bone conditions, particularly the loss of bone stock on the talar side. Therefore, fusion of the tibiotalar joint is often extended to the talocalcaneal joint to provide sufficient stability. To preserve the subtalar joint, an anterior double plate system for rigid fixation of isolated tibiotalar arthrodesis was developed. This is a preliminary report on the clinical and radiological outcome with this technique. MATERIALS AND METHODS: Twenty-nine patients (15 men, 14 women; one ankle per patient) were treated from October 2006 to September 2007. We converted 16 ankles with osteoarthritis and difficult bone conditions, four non-united ankle arthrodeses, and nine failed total ankle replacements to an isolated tibiotalar arthrodesis using anterior double plating. If necessary, we used solid allograft to fill bony defects. Outcomes included bone union as assessed by radiographs, pain as indicated by the American Orthopaedic Foot and Ankle Society scores, and patient satisfaction. RESULTS: Solid arthrodesis was achieved after an average of 12.3 (eight to 26) weeks in the 16 ankles without bone graft interposed between the tibia and talus, and 14.3 (range, 8 to 26) weeks in the 13 ankles with interpositional bone allograft. Radiographs showed that the position of arthrodesis obtained at the time of surgery did not change in any patient up to one year after surgery. The mean American Orthopaedic Foot and Ankle Society (AOFAS) Hindfoot Score increased from 37 (range, 20 to 63) pre-operatively to 68 (range, 50 to 92) at the last followup. Twenty-seven patients (93%) were satisfied with their outcome and indicated they would have the operation again. No complications were noted. CONCLUSION: The anterior double plating system was shown be a reliable method to achieve solid isolated tibiotalar arthrodesis, even in ankles with difficult conditions such as loss of bone stock due to failed total ankle arthroplasty.

Publisher Williams and Wilkins**ISSN/ISBN** 1071-1007**edoc-URL** <http://edoc.unibas.ch/dok/A6004595>**Full Text on edoc** No;**Digital Object Identifier DOI** 10.3113/FAI.2009.0631**PubMed ID** <http://www.ncbi.nlm.nih.gov/pubmed/19589309>**ISI-Number** WOS:000267604500007

