Tibiotalocalcaneal Arthrodesis with a Retrograde Triple Bending Nail - Results of 200 Cases
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**Introduction/Purpose:** The aim of the study was to analyse the clinical aspects including minimum 1-year-followup of tibiotalocalcaneal arthrodeses (TTCA) with a triple-bend retrograde intramedullary nail (A3, Stryker, Airview Boulevard, MN, USA).

**Methods:** In a prospective consecutive non-controlled clinical followup study, all patients with TTCA using A3 from October 18th, 2011 to October 10th, 2015 were analyzed. The time and accuracy of the alignment and implant position (Visual analogue scale, 0-10) for implant placement, complications, radiological fusion, and Visual Analogue Scale Foot and Ankle (VAS FA) were recorded. Fusion (=50% bony bridge at ankle and subtalar joints assessed on radiographs) was assessed at 6, 9, 12 weeks, then latest follow-up. VAS FA was recorded at latest follow-up.

**Results:** 200 cases were included (age, 59.3 (22-83) years; VAS FA, 31.9 (0-79.3)). Indications were specified as follows (multiple possible): osteoarthritis, n=182 (91%); instability, n=48 (24%); deformity, n=154 (77%), failed total ankle replacement, n=12 (6%); failed previous fusion, n=15 (8%), diabetes, n=28 (14%). The time for implant preparation and positioning was 17.2 (5-32) minutes. The accuracy of alignment and implant position was 9.4 (7 - 10). Complications were registered in 12 (6%; n=6 (3%) infection, n=6 (3%) wound healing delay. One hundred and sixty-eight (84%) patients completed follow-up at 32 (12-60) months: VAS FA 60.4 (t-test (comparison with preoperative scores), p=.01)), fusion rate 96%.

**Conclusion:** TTCA with the A3 implant system showed accurate correction and implant position. Thirty-two month (average) followup of 168 patients (84%) showed good clinical outcome scores and 96% fusion rate.