

The use of a proximal humeral locking plate for tibiotalocalcaneal arthrodesis: A Case Series

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INTRODUCTION

- “ TTC fusion an infrequently reported procedure
 - . Largest case series involved 30 patients¹

- “ Most reports are on Charcot neuroarthropathy, though several indications exist for the procedure^{2,3,4}
 - . Avascular necrosis of the talus
 - . Failed total ankle arthroplasty with subtalar intrusion/ insufficient talar body
 - . Sequelae of trauma
 - . Neuromuscular disease
 - . Hindfoot deformities

- “ Principle of treatment is to obtain a painless, brace-free plantigrade foot

- “ TTC fusion an effective surgical option⁵
 - . Current standard of care for failed conservative treatment

- “ Wide variety of materials used to achieve arthrodesis
 - . Screws⁶
 - . Blade plates⁷
 - . Retrograde intramedullary nails⁸
 - . External fixation⁹

- “ No implant cited as standard for use in TTC fusion

- “ Use of proximal humeral locking plate for TTC fusion first reported by Raikin *et al*¹⁰
- “ Reports since then^{11,12,13}
 - . Increased stability
 - . Reduced operating time and blood loss
 - . Less requirement for intra-operative fluoroscopy
 - . Easily reproducible technique
- “ Case report of 5 patients



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Patients

- “ 5 patients
- “ Over past 1 year
- “ 2 Trauma, 1 Avascular necrosis, 1 Charcot joint, 1 Revision ankle fusion

Technique

- “ Depends on pathology
- “ Excise fibular
- “ Prep joints ankle & subtalar
- “ Compression screw

Preliminary Results

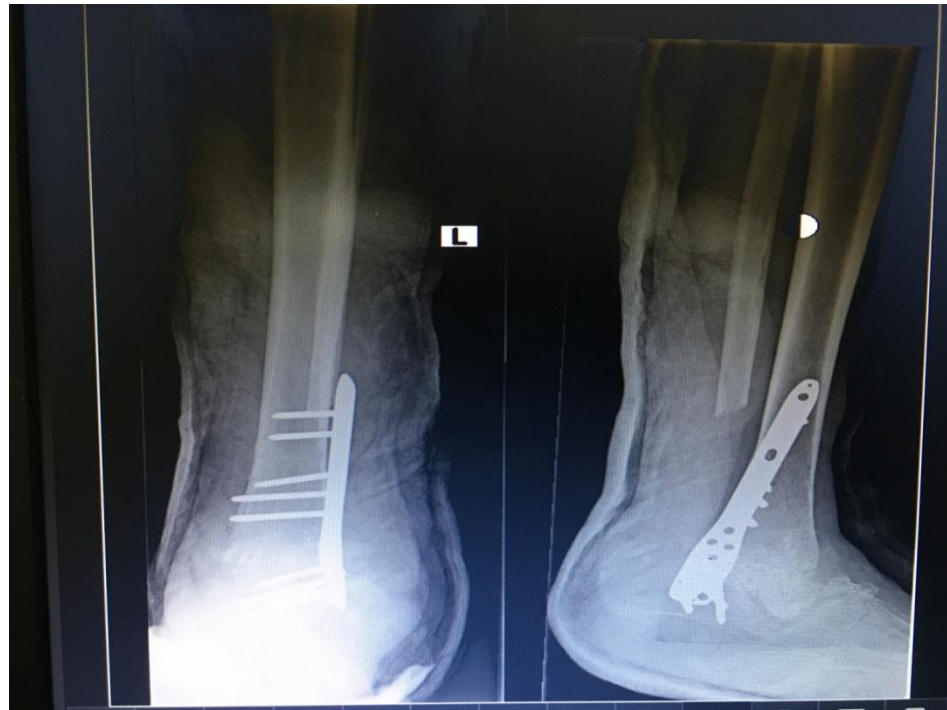
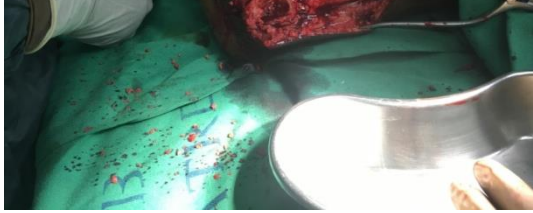
- “ Fusion in 2
- “ 3 too early: 8 weeks post-op
- “ Technically easier
- “ Readily available and less expensive

AVN Talus



Charcot Foot





Minimally Invasive Ankle Fusion



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