

Patient-reported outcomes after Permissive Weight Bearing in surgically treated trauma patients with Displaced Intra-Articular Calcaneal Fractures: a multicenter, retrospective cohort study

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Introduction

The current aftertreatment for displaced intra-articular calcaneal fractures (DIACFs) is non-weight bearing for 8-12 weeks. The aim of this study was to assess whether early postoperative permissive weight bearing (PWB) results in improved patient-reported outcomes after a minimum of two years follow-up compared to restricted weight bearing (RWB).

Method

Surgically treated patients with DIACFs in the period from 2015-2020, allocated to one of both aftertreatment protocols (PWB or RWB respectively). Function of the foot and ankle was measured with the American Orthopaedic Foot and Ankle Society (AOFAS) Ankle-Hindfoot Score and the Maryland Foot Score (MFS). Health related quality of life was assessed using the Short Form-12 (SF-12) and EuroQoL EQ-5D-5L (EQ-5D). Moreover, radiographical parameters and complications were recorded.

Results

34 patients were available for follow-up (14 PWB vs. 20 RWB). The distribution of fracture types and time-to surgery were significantly different for both groups. The PWB-group had higher functional outcome scores on the AOFAS (83.4 vs. 72.8, $p=0.18$) and MFS (86.3 vs. 78.9 $p=0.25$). The AOFAS showed a clinically relevant difference of 14.5%. PWB showed better outcomes on the SF-12 PCS (41.4 vs. 40.0) and EQ-5D (0.86 vs. 0.80). Radiographical parameters and complication rates were comparable.

Conclusion

This study suggests that both aftertreatment strategies yield comparable PROMs and a clinically significant difference in the function of the foot and ankle without radiographical failures and a comparable complication rate. These findings imply that the choice between PWB and RWB should be tailored to individual patient characteristics, fracture patterns, and surgeons' expertise.