

Subtle Factors Associated with Outcome of Ankle Fractures: Don't Forget Intra-Articular Loose Bodies

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Introduction

Despite ubiquity of ankle fractures and surgical experience and comfort with these injuries, outcomes do not match the expectations. Some studies revealed Haraguchi classification and fracture severity to be important. In this study we explored the effect of 'subtle' factors on outcome, for example loose bodies and malpositioned hardware.

Method

This study performed a retrospective review of 102 prospectively collected anonymous postoperative Computed Tomography (CT) scans of adult patients with ankle fractures from the randomized clinical EF3X-trial. All included patients completed the Foot and Ankle Outcome Score (FAOS) at two years post-operatively. Subtle factors hypothesised to affect outcome were: loose bodies in the ankle joint or syndesmosis; posterior malleolar edge impaction; and malpositioned hardware.

Results

There are no significant differences between AO/OTA types A (n=6), B (n=74) and C (n=22) for all FAOS domains. Univariate analysis shows that Loose bodies result in significantly lower outcomes in: Pain, Activities of Daily Living and Quality of Life. Multivariate analysis with adjusting for confounders revealed 'Haraguchi classification' and 'Loose bodies' to be significant contributing factors.

Conclusion

In AO type 44 ankle fractures, loose bodies in the joint or syndesmosis, significantly affect patient reported Pain and Quality of Life at two years postoperatively. During surgery, effort should be made to identify and remove loose bodies by thoroughly washing the ankle joint or performing an ankle arthroscopy.

Supplemental Figure 1. Examples of Loose Bodies in Syndesmosis (left column) and Joint (right column)

