Smith TO, Clark A, Hing CB. Interventions for treating proximal fifth metatarsal fractures in adults: a meta-analysis of the current evidence-base. Foot Ankle Surg. 2011;17(4):300-7.

Design: meta-analysis of clinical trials

Purpose of study: to compare the evidence regarding the effectiveness of surgical and nonsurgical interventions for fifth metatarsal fractures in adults

Reasons to cite as information rather than evidence:

- The search strategy and overall methodology is of high quality, with multiple databases searched with a clear search strategy, two authors independently assessing studies for inclusion and rating them for risk of bias using the Cochrane risk of bias tool
- The study's authors found 6 studies which met their criteria for review, 5 of them RCTs
- The risk of bias was high in the RCTs, only two trials clearly described their randomization and reported allocation concealment ; none blinded their outcome assessments; only one study showed that the treatment groups were comparable at baseline, and only three trials clearly reported losses to followup and participant dropouts
- Surprisingly, the authors did not find studies comparing different surgical procedures; since such "technical" RCTs often out-number RCTs which compare surgery with nonoperative treatment, this is a departure from that pattern
- Therefore the literature does not rise to the level of evidence, but does report some information which can prove useful
    - In the setting of avulsion fractures, casts and bandaging treatments lead to similar foot and ankle function scores, but the bandage treatments had a trend toward better patient-reported pain and function compared to casting
    - In the setting of Jones fractures, two studies compared a surgical to a nonsurgical intervention
        - These studies did not report the degree of fracture displacement at baseline, which limits their informational value
        - Both studies compared surgical intervention using intramedullary screw fixation with cast immobilization
        - The authors pooled results from the two studies for frequency of delayed union and for frequency of refracture, and found no significant difference; however, because the studies were small, the authors presented a narrative review

        - This narrative review found that non-union was more frequent in nonsurgically treated Jones fractures in both studies, and that the nonsurgically treated fractures required subsequent surgical intervention due to nonunion
        - However, the surgically treated patients in one study reported that 6 of the 19 surgically treated patients had discomfort from the screw head, requiring screw removal in 4 patients
    - The authors make a tentative conclusion that minimally displaced metatarsal fractures may be as effectively treated with bandages as with below-knee casts, but that this is uncertain, and further study is essential to determine the comparative effectiveness of casts and bandages for these minimally displaced fractures