

An Immediate Weight-Bearing Protocol for the Determination of Ankle Stability in Patients with Isolated Distal Fibular Fractures

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Purpose: Treatment of isolated distal fibular fractures relies on the ability to determine ankle stability radiographically. Current studies suggest the ankle should be stressed, by either a manual or gravity stress radiograph. We evaluated our protocol of allowing immediate weight bearing as tolerated (WBAT) in a functional walking boot in patients with isolated distal fibula fractures and no medial clear space (MCS) widening (44-B1) on nonstressed initial radiographs with subsequent weight-bearing radiographs at 1-week follow-up. We sought to determine if this protocol would allow us to differentiate stable (44-B1) from unstable (44-B2.1) fractures.

Methods: This study is a retrospective case series of patients with isolated distal fibular fractures managed by our authors between 2007 and 2012. Inclusion criteria include isolated distal fibula fractures with no widening of the ankle mortise (MCS 4 mm) were treated with operative fixation. Radiographs were repeated at approximately 6 weeks, or until radiographic union.

Results: Between 2007 and 2012, 185 isolated distal fibula fractures were treated at our institution. 74 patients presented with initial ankle mortise widening and operative treatment was recommended. A total of 87 patients with no initial MCS widening met the inclusion criteria, and were managed per the study protocol. Two of the 87 (2.3%) widened at 1-week follow-up with weight-bearing radiographs and underwent operative fixation. The remaining 85 patients were treated nonoperatively. None of these 85 patients had evidence of MCS widening on weight-bearing radiographs at time of radiographic healing.

Conclusion: These results suggest that our immediate weight-bearing protocol is an effective method for the determination of functional ankle stability in the setting of an isolated distal fibula fracture. Further investigation with a randomized study comparing our protocol to stress radiographs is warranted.