

Abstract

Introduction: Soft-tissue mallet finger occurs due to loss of terminal extensor tendon secondary to rupture of distal phalanx. Although using noninvasive splints for 6–8 weeks is the gold standard for conservative treatment of closed soft-tissue mallet injuries, patient compliance is an important factor impacting on patient outcomes. In this study, we used a single Kirschner Wire (K-W) to fix the distal interphalangeal (DIP) joint in extension in those patients failed to comply with routine splinting.

Materials: and methods In this prospective study, 190 patients with Doyle type 1 closed soft-tissue mallet finger deformity were included in four groups between 2011 and 2015. These groups were determined according to treatment modalities. Patients in the first group were treated with a finger splint ($n = 109$). Patients in the second group first received a finger splint and then K-W was applied due to lack of adequate compliance ($n = 23$). Patients in the third group were treated with K-W only ($n = 47$), and the fourth group did not accept surgical treatment nor conservative treatment ($n = 11$). After 20 weeks of follow up, we evaluated the results with functional measurements according to Crawford criteria and patient satisfaction. Additionally, the mid-term outcome was assessed with a follow-up at 2 years.

Results: At 20th week postoperatively, average DIP extension lag was 6 degrees (0–30) for the first group, 6.1 degrees (0–30) for the second group, 3.8 degrees (0–25) for the third group, and 17.3 degrees (7–30) for the fourth group. Total patient satisfaction was 85%, which was considered excellent or good. Swan neck deformity was observed in 11% of patients. Osteomyelitis and KW related complications were not observed. There were no statistically significant differences between short-term and mid-term results.

Conclusion: Internal fixation via K-W may be a suitable treatment option compared to splint therapy for management of closed soft-tissue mallet finger in noncompliant patients. Using this treatment approach, the success rate for patients could satisfactorily be improved.

Keywords: Mallet finger, Compliance, Extensor tendon, Finger deformity

[Yayına ulařmak i in tıklayın -A single K  wire to prevent poor outcomes in closed soft  tissue mallet finger management due to patient non-compliance](#)