Extensor tendon splitting versus extensor tendon sparing approach for miniplate fixation of extraarticular proximal phalangeal fractures

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Abstract:

Background: Unstable phalangeal fractures constitute a challenge for surgeons with many options for operative treatment. Miniplate fixation of these fractures has the advantages of stability and neutralization of bending, rotational, and shear forces. To our knowledge, this is the first study to compare the functional results of an extensor tendon splitting approach with an extensor tendon sparing approach in extraarticular proximal phalangeal fracture fixed with a miniplate and screws. Methods: In a randomized prospective study we compared two groups of patients: group A, patients treated with an extensor tendon splitting approach (24 fractures in 21 patients with average age 31.9 yr) and group B, patients treated with an extensor tendon sparing approach (26 fractures in 19 patients with average age 30.8 yr). The final results were assessed with total active range of motion (TAM), grade of TAM, grip strength and Quick Disability of the Arm, Shoulder, and Hand (DASH) Score. Results: A TAM of 220 degrees or more was achieved in 79.2% (19/24) and 84.6% (22/26) of fractures in group A and B, respectively. There was a significant reduction in grip strength in group A compared to group B (45.9 ± 8.4 kg vs. 51.7 ± 7.3 kg; P

Keywords:

phalanx, operative treatment, tendons, fixation

Published In:

Current Orthopaedic Practice, Vol.27, No.6, NULL