

Early Mobilization after Volar Plate Osteosynthesis of Distal Radius Fractures – a Prospective Randomized Study.

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Background: Distal radius fracture is one of the most common fractures in people over 50. Volar locked plating has become the primary choice of treatment. Little is known about the postoperative regime and the influence on outcome and morbidity.

Purpose / Aim of Study: To investigate if early mobilization improved patient reported outcome and did not increase the risk of fracture displacement.

Materials and Methods: The study was performed as a prospective, randomized trial. 100 patients with distal radius fracture treated with volar locked plating were randomized 1:1 to either removable wrist lacer with mobilization from day one or cast for 14 days before mobilization. The primary outcome measure was the DASH-score after 1, 3, 6 and 12 months. The score range from 0 to 100 with 0 being the best possible score. Secondary outcome measure was fracture displacement at x-rays after 14 days. Statistical analysis was done using a repeated measurement ANOVA model of the square root transformed DASH scores. Overall difference between groups was assessed using a maximum likelihood ratio test.

Findings / Results: 83 patients were eligible for analysis after 12 months. The estimated median DASH score in the early mobilization group [n = 41] after 12 months was 7.46, 95% CI [4.74, 10.78] compared to 8.37 [5.28, 12.17] in the late mobilization group [n = 42], p = 0.69. One fracture dislocation occurred after 14 days in the early mobilization group, but can be explained by a wrong use of the volar locking plate.

Conclusions: The study did not find any statistical significant difference between groups though DASH scores at all follow ups were lower in the early mobilization group. Early mobilization with removable wrist lacer is a safe and equal postoperative treatment compared to regular casting.

No conflicts of interest reported