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Comparison of Functional outcomes for displaced extra-articular distal radius fractures managed by Conservative versus Operative methods: A Prospective cohort study

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Abstract:

Background: Despite the high incidence of displaced distal radius fractures and the substantial possible implications of suboptimal management, no high level evidence regarding the best treatment method yet exists. The objective of this study was to compare the outcomes of fractures managed operatively with those managed conservatively.

Methods: In this prospective cohort study conducted between November 2018 to September 2020, 18 to 65 years old patients with displaced extraarticular distal radial fracture were treated surgically or conservatively by plaster immobilization. The functional outcomes were determined at 12 months by DASH score and Modified Mayo wrist score.

Results: At 12 months evaluation, operatively treated patients had better functional and clinical outcomes, as indicated by significantly higher Mayo scores, range of motion and grip strength measurements (p values < 0.05). The DASH score was also better in the operative group, though not significant. Functional scores were comparable between closed reduction K-wire group and open reduction locking plate group. Multivariate analysis revealed worse outcome scores with increasing age.

Conclusions: Patients with a displaced extra-articular distal radial fracture treated surgically have better functional outcomes after 12 months compared with patients managed conservatively. Thus, surgical fixation should be considered for patients who experience this common injury.