

Clinical and Medical Case Reports

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The treatment method and results of percutaneous pinning and dynamic external fixator application for unstable distal radius fractures

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Objective: The aim of this study is to present results of patients with unstable distal radius fracture treated with closed reduction and percutaneous fixation followed by application of Pennig dynamic wrist fixator (Orthofix, Srl, Italy) allowing early wrist motion.

Materials and Method: This study includes 25 patients diagnosed with distal radius fracture and treated with closed reduction and percutaneous fixation followed by application of dynamic wrist fixator. The number of male and female patients were 15 (%60) and 10 (%40), respectively. The mean age of patients was 47.32 (20-76). The mean period between initial trauma and operation was 8.52 (1-23) days. Mean follow-up was 20.3 (8-60) months. All patients were allowed active shoulder, elbow and finger exercises immediately after surgery. The external fixator was dynamized at the end of the 3rd week and removed at the mean of 6,8 (5-8) weeks.

Results: Radiologic evaluation was performed according to criteria described by Sarmiento and modified by Lidström. Results revealed excellent in 12 (%46.15) patients, good in 11 (%42.30) patients, and fair in 3 (%11.55) patients. No patient had a poor result. Functional scores were assessed according to Gartland-Werley classification and modified by Sarmiento. Results revealed excellent in 14 (%56 patients), good in 8 (%32) patients and moderate in 3 (%12) patients.

Conclusion: Use of Pennig dynamic wrist fixator in the treatment of unstable distal radius fractures has advantages such as; ease of use, minimal surgical trauma, allowing early rehabilitation, and early return to daily activities as well as increased anatomical and functional results.

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