

Δ Non-Reduced Distal Radius Fractures in Adults: One Week versus Three to Five Weeks of Cast Immobilization (Cast-OFF 2)

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Purpose: Distal radius fractures (DRFs) are one of the most common fractures observed with an overall prevalence of 17.5%. One-third of these fractures are non-dislocated. In the last couple of years, several studies have investigated the operative treatment of dislocated DRFs. However, little attention has been paid to the treatment of stabile DRFs with traditional cast immobilization. Previous research showed that shorter duration of cast immobilization (1 week) resulted in similar pain scores, function, and secondary dislocation versus longer immobilization (3 to 4 weeks). In this study, we implement 1 week of cast immobilization for non-reduced DRFs and compare the outcome with the usual care to investigate functional outcome and pain scores.

Methods: A randomized stepped wedge design was used with 11 participating hospitals including patients with an isolated non-reduced DRF (Figure 1). Every hospital started January 1, 2022 with 3 to 5 weeks of cast immobilization. Every month, 1 hospital changed protocol to 1 week of cast immobilization. Questionnaires were scored at week 1, week 3 to 5 after which online surveys were sent at week 6, month 3, 6, and 12. The primary outcome was the Patient-Rated Wrist Evaluation (PRWE) at week 6.

Results: Currently data are still being collected. The interim analysis of 405 included patients shows the following preliminary results. No significant difference is observed in pain scores between both groups after one week and three to five weeks of immobilization (visual analog scale [VAS] 3.0 ± 2.5 control vs 2.8 ± 2.1 intervention, $P = 0.08$). The PRWE score after 6 weeks shows no significant difference (PRWE 32.3 ± 24.4 control vs 28.9 ± 21.7 intervention, $P = 0.09$). Furthermore, there was no difference in secondary dislocation between the 2 groups.

Conclusion: The preliminary results after 6 weeks of follow-up show pain scores, function, and secondary dislocation do not differ when comparing 1 week of plaster immobilization for non-reduced DRFs with the usual care of 3 to 5 weeks of immobilization.

CLUSTER	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12
1	A	A	B	B	B	B	B	B	B	B	B	B
2	A	A	A	B	B	B	B	B	B	B	B	B
3	A	A	A	A	B	B	B	B	B	B	B	B
4	A	A	A	A	A	B	B	B	B	B	B	B
5	A	A	A	A	A	A	B	B	B	B	B	B
6	A	A	A	A	A	A	B	B	B	B	B	B
7	A	A	A	A	A	A	A	B	B	B	B	B
8	A	A	A	A	A	A	A	A	B	B	B	B
9	A	A	A	A	A	A	A	A	A	B	B	B
10	A	A	A	A	A	A	A	A	A	A	B	B

A = Usual care, three-five weeks of plaster cast treatment.

B = One week of plaster cast treatment.

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See the meeting website for complete listing of authors' disclosure information. Schedule and presenters subject to change.