

Clinical Trial in the Treatment of A2-OTA Type Fractures of the Distal Radius by Casting

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Purpose: This trial was conducted to compare the final results of distal radius A2-OTA type fractures treated with either long or short arm casts.

Methods: This prospective randomized clinical trial was performed on 100 patients with distal radius fractures. Fifty patients were treated in each group either by short or long arm cast. Data were recorded during the 6th and 18th weeks after the reduction and casting.

Results: There were no significant differences between groups regarding age, gender, and the type of fracture. There were significant differences between the two groups regarding the range of elbow flexion and extension and forearm supination and pronation that were decreased with time. There was no significant difference regarding the stability of the distal radioulnar joint. There was no malunion, nonunion, carpal tunnel syndrome, or compartment syndrome in either group.

Conclusion: According to this short-term study, a short arm cast with three-point molding provides adequate therapeutic result in A2-OTA type fracture with low cost and good acceptability.

PAPER ABSTRACTS

Table 1. Preoperative Characteristics of the Fracture in the Long and Short Arm Cast Groups

Fracture Characteristics		Type of Cast		P Value
		Long arm cast N (%)	Short arm cast N (%)	
Radial inclination in plain AP view	≤10°	0	0	0.52
	11°-15°	15 (30%)	19 (38%)	
	>15°	35 (70%)	31 (62%)	
Dorsal tilt angulations in lateral view	≤9°	34 (68%)	30 (60%)	0.53
	10°-19°	16 (32%)	20 (40%)	
	≥20°	0	0	
Radial shortening in plain AP view	≤5 mm	38 (76%)	40 (80%)	0.6
	6-9 mm	12 (24%)	10 (20%)	
	≥10 mm	0	0	

• The FDA has not cleared this drug and/or medical device for the use described in this presentation (i.e., the drug or medical device is being discussed for an "off label" use). For full information, refer to page 600.

Table 2. Evaluation of the Patients at 6- and 18-Week Follow-up*

	Follow-up	LAC	SAC	<i>P</i>
Limitation of range of flexion - extension of the elbow	Week 6	26 (52%)	0	<0.05
	Week 18	4 (8%)	0	<0.05
Limitation of range of supination and pronation of the forearm	Week 6	28 (56%)	1 (2%)	<0.05
	Week 18	5 (10%)	0	<0.05
DRUJ Instability	Week 6	1 (2%)	2 (4%)	>0.05
	Week 18	0	0	

*LAC = long arm cast, SAC = short arm cast, DRUJ = distal radioulnar joint.