CONVENTUS DRS INTRAMEDULLARY FIXATION FOR DISTAL RADIUS FRACTURES: A CASE SERIES

Stephanie Malliaris MD, Schneider Rancy BA, Scott W. Wolfe, MD
Hospital for Special Surgery, New York, NY USA

Introduction

Conventus DRS is a novel FDA-approved intramedullary fracture fixation device used for distal radius fractures. Volar plating complication rates range 3-37% in the literature. Conventus DRS complication rate is reported as 8.3% in the 2012 white paper. We examine a series of 19 patients with distal radius fractures treated with Conventus DRS ORIF and report the outcomes.

Methods

19 patients with distal radius fractures (13 AO type C1 and C2; 6 AO type A2 and A3) underwent ORIF using Conventus DRS by a single surgeon. Data including fracture type, angle of displacement, grip strength, wrist ROM, PRWE, and VAS pain scores were recorded at time of surgery and at follow-up.

*Average age: 48 yrs (18-74)
*Follow up: 4.6 mos (2-12)

Results

Figure 1. Postoperative PA and lateral radiographs.

Table 1. Objective Results.

Parameter	Affected Arm	Contralateral
Extension (deg)	76 (91%)	83
Flexion (deg)	74 (87%)	86
Rad Dev (deg)	15 (82%)	19
Ulnar Dev (deg)	27 (85%)	33
Supination (deg)	79 (97%)	81
Pronation (deg)	76 (97%)	78
Grip Strength (lbs)	51 (77%)	67
Digital Flexion	0 (100%)	0

Table 2. Radiographic Results.

Parameter	PreOp	2 Wks	Final
Ulnar Variance (mm)	2.2	-0.5	-0.3
Radial Inclination (deg)	22	21	22
Volar Tilt (deg)	-24	-2	2
Coronal Shift (mm)	4.0	0.7	0.2
DRS Axle to Subchondral Plate (mm)	N/A	1.7	1.6

- VAS Pain Score: average = 0.8 (median 0)
- PRWE: average = 17 (range 0-53)
- No tourniquet was used
- All patients: full digital motion at first follow-up visit

Complications

Screw Removal – 2 pts
- 1 - asymptomatic
- 1 - dorsal tendon irritation

Hardware Removal – 1 pt
- fracture subsidence

Screw Prominence – 1 pt
No infections
No CRPS

Conclusions

Conventus DRS is a promising alternative to established methods of distal radius ORIF.

- Minimal postoperative swelling
- Rapid return of digital function
- Low pain scores
- Lack of soft tissue complications
- Safe and effective for articular and extra-articular distal radius fractures
- Learning curve for device