



# All-Metal Distal Radius Hemiarthroplasty combined with Proximal Row Carpectomy

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### Introduction:

TWO main options in patients with end-stage arthritis affecting lunate facet

- 1) Total wrist arthrodesis: motion sacrificing
- 2) Total wrist arthroplasty: avoid in young/implant loosening

We suggest a THIRD: Hemiarthroplasty

First described by Brian Adams 2010  
End-stage arthritis affecting lunate facet  
Younger patients who desire motion

- Avoid some of the total wrist arthroplasty complications



### Results:

- 7 patients *excluded*
- 19 patients left for *inclusion*
- Mean length of clinical follow up: **1.3 years** (range 0.6 to 2.0 years)
- Mean length of PRWE follow up: **2.0 years** (range 1.3 to 2.6 years)

### Conclusions:

- Wrist Hemiarthroplasty is a novel motion-preserving treatment for wrist arthritis
- Loss of flexion (and thus a total loss of flexion-extension arc) is significant post-operatively
  - But Extension and Grip Strength are preserved
- Impingement can occur at the surrounding carpal bones, and may be addressed with subsequent partial excision
- Longer follow up for this type of implant is required to fully assess the clinical impact of radiographic changes

	Average Preoperative Value	Average Postoperative Value	P value
Flexion °	38.1	24.0	<b>.005</b>
Extension °	33.1	29.0	.499
FE Arc °	71.1	53.0	<b>.041</b>
Average grip %	55.1	69.2	.269

### Methods:

Retrospective review

- 26 patients underwent all-metal hemiarthroplasty with proximal row carpectomy from 2010 to 2012
- Small Bone Innovations (SBI) Re-Motion prosthesis "off-label"

Preoperative and Postoperative Review

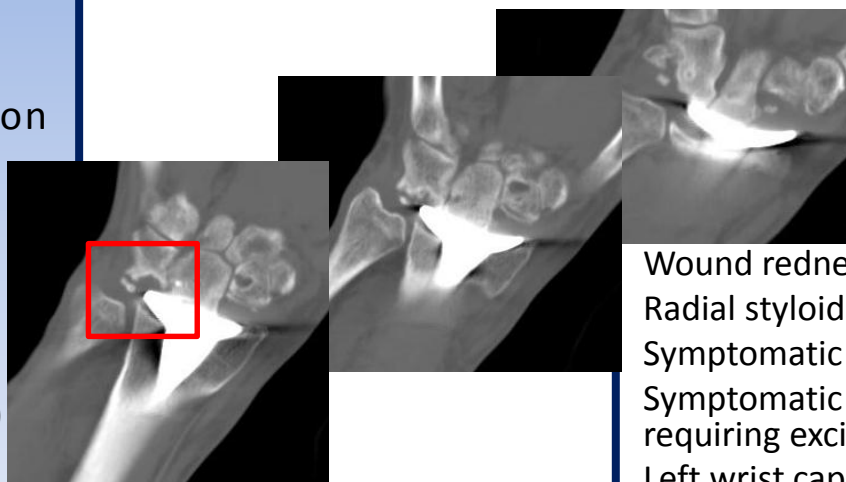
- Range of motion
- Grip strength
- Radiographs

Collected from phone interview

Patient Rated Wrist Evaluation (PRWE)

Exclusion criteria

- <6 months follow up or previous hemiarthroplasty



### Results – PRWE Questionnaire

18/19 patients available for contact  
1 phone number disconnected  
Mean PRWE Pain: 21.8 (out of 50)  
Mean PRWE Function: 20.1 (out of 50)  
Mean PRWE Total: 41.9 (out of 100)

### Results – Complications

- Wound redness/drainage, resolved with Keflex (1)
- Radial styloid fx requiring pinning at time of surgery (1)
- Symptomatic trapezium/trapezoid impingement (1)
- Symptomatic hamate osteophyte/impingement (3, *see CT scan to left*), requiring excision in 2 patients
- Left wrist capsular and flexor tendon contractures requiring tenolysis (2)
- Symptomatic DRUJ OA (2) | Tendonitis (1) | CRPS (1)