

# Outcomes of Suture Suspension Arthroplasty in the Treatment of Basilar Joint Arthritis

## METHODS

### Demographics:

60 patients (19M, 41F) with 64 cases of basilar joint arthritis were treated with Suture Suspension Arthroplasty over a 3 year period (Mean Age 63.6; range 37-80).

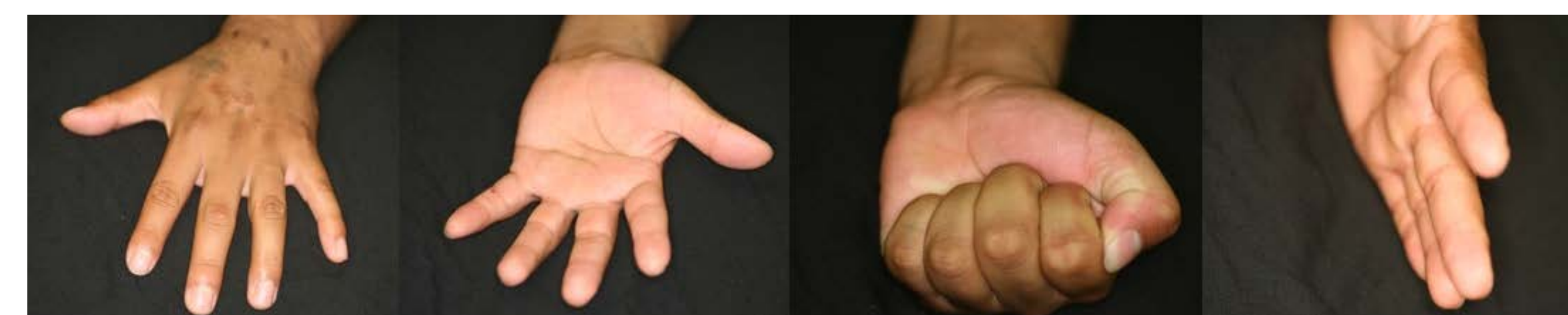
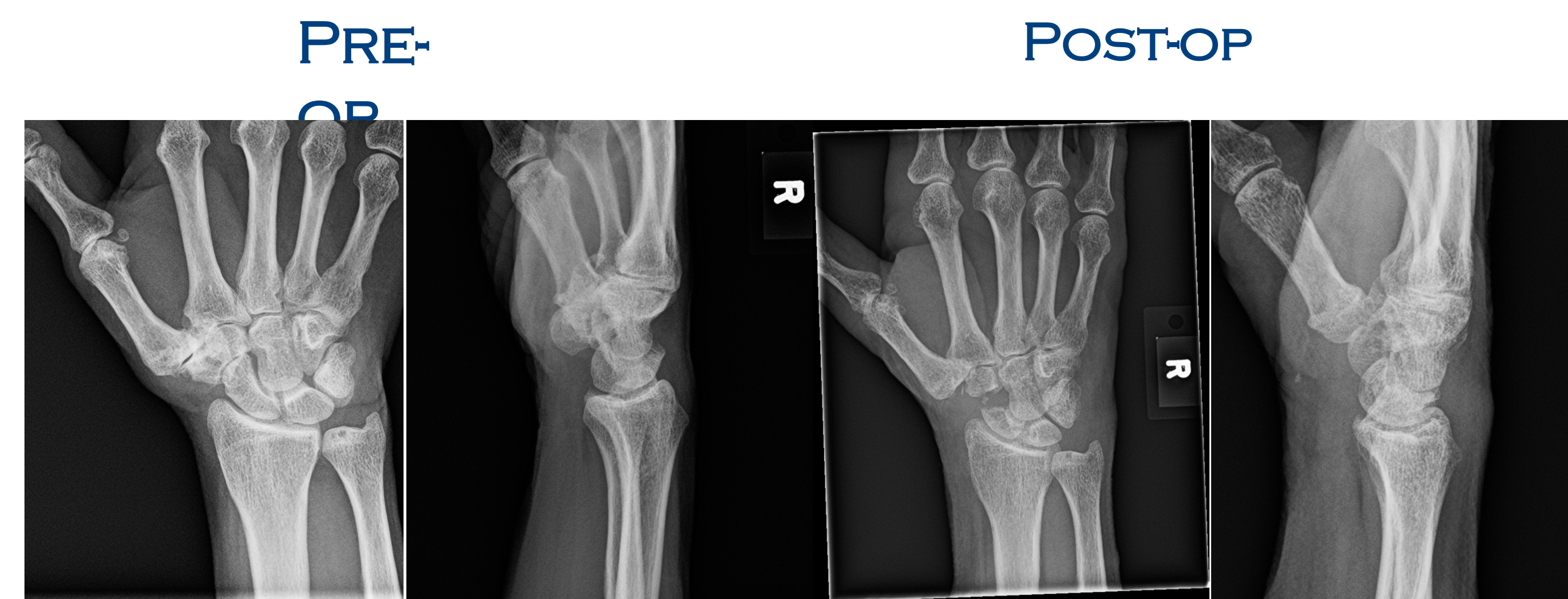
### Surgical Technique:

First, a trapeziectomy was performed under fluoroscopic assistance. A suture was then passed through the abductor pollicis longus and flexor carpi radialis creating a suture suspension sling to maintain joint space and soft tissue tension.

### Methods:

A retrospective chart review was done over a 6 year period with a mean follow up of 14 months. X-ray analysis was used to determine 1st metacarpal subsidence by measuring the trapezial space ratio as defined by Kadiyala et al (1996). DASH Scores were obtained to determine patient satisfaction.

## RESULTS



Average Preoperative Ratio of Trapezial height to Metacarpal	0.360
Average Postoperative Ratio of Trapezial height to Metacarpal	0.253
Average Difference in trapezial height from Pre- to Post-op (cm)	-0.107cm

	2 weeks PO*	Final follow-up	% Increase
DASH score		6.5	
Mean dorsiflexion	55.9° ± 15.9	65.3° ± 11.7	16.8
Mean volar flexion	51.4° ± 17.4	64.1° ± 14.0	24.8
Mean radial deviation	18.1° ± 5.0	22.4° ± 3.4	23.6
Mean ulnar deviation	22.4° ± 7.0	28.3° ± 6.9	26.3
Mean MP Flexion	51.4° ± 19.7	77.49° ± 17.7	50.9
Mean PIP Flexion	81.9° ± 18.1	97.87° ± 17.1	31.1
Mean MP Extension	-9.6° ± 10.7	-3.7° ± 10.6	11.5
Mean PIP Extension	-11.4° ± 13.8	0.5° ± 9.7	23.2

## RESULTS

- Preliminary clinical outcomes for 60 patients treated with SSA (mean follow-up of 14 months) showed an average initial follow-up DASH score of 45.94.
- Outcomes showed a 6 month score of 29.93, 1 year score of 25.15, and final follow-up score of 25.74.
- The average pre-op trapezial space ratio was 0.337 with an average decrease of 0.116 after surgery.

## CONCLUSIONS

- Trapeziectomy and suture suspension arthroplasty is an effective treatment option for thumb basilar joint arthritis when compared to other arthroplasty techniques.
- SSA allows for shorter immobilization, avoids sacrificing a tendon or using anchors, and can be performed in an efficient manner.
- Minimal subsidence of the 1<sup>st</sup> metacarpal was experienced using the SSA technique.