



Adhesive capsulitis interventions: Hydrodilatation Vs Pulsed radiofrequency of Suprascapular Nerve

Ravi S Sharma, All India Institute of Medical sciences, Gorakhpur



Poster Number: TU-605

INTRODUCTION

- Adhesive Capsulitis (AC) → Frozen shoulder
- C/F : Shoulder pain and gradual onset of significantly diminished active and passive range of motion (ROM) .
- Oral analgesics, intra-articular steroid injections, physical therapy, and minimally invasive therapy → Different stages of the disease.
- Ultrasound-guided (USG) Pulsed radiofrequency (PRF) ablation of Suprascapular Nerve (SSN) and hydrodilatation interventions → Managing pain and improving ROM.
- Aim: To compare & evaluate the effects of USG-guided hydrodilatation in rotator interval and PRF of the SSN in patients of shoulder AC

Methods

- Study Design** – A Randomized Controlled Trial
- 2 groups of 30 patients each** : AH-Group (Patients who underwent USG-guided hydro dilatation in rotator interval) and PRF-Group (Patients who underwent PRF Ablation of SSN).
- All the patients → 12 weeks of physical Rx.
- Primary outcome** → Pain intensity (NRS).
- Secondary outcome** → Shoulder pain and disability index (SPADI), ROM improvement, Emotional functioning (HADS) score.
- Outcome measurements** → Baseline, immediately post-procedure, at 1 month & 3 months
- Statistical significance** level was maintained at a P-value <0.05.



Figure 1 demonstrating Probe orientation and USG picture of SSN while figure 2 demonstrating USG picture of Rotator interval

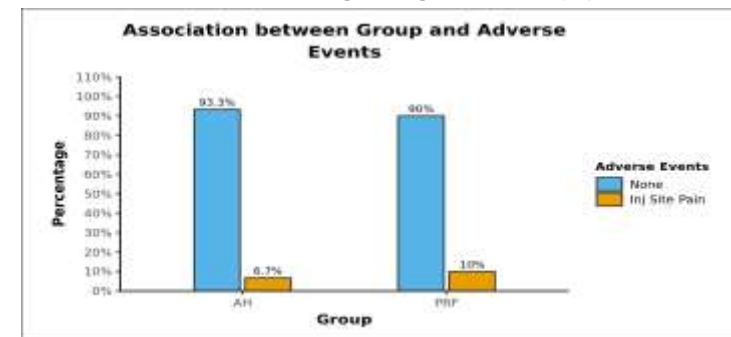
RESULTS

NRS	Group		P-value
	AH Mean (SD)	PRF Mean (SD)	
Baseline	6.60	6.80	0.249
Immediate Post-Injection	2.63	2.30	0.011
1st Month	2.53	2.43	0.447
3rd Month	2.83	4.50	<0.001
P -value	<0.001	<0.00	
Overall P- Value	<0.001		

Table 1 : Comparison of the 2 Subgroups of the Variable Group in Terms of NRS

I	Group		P-value
	AH Mean (SD)	PRF Mean (SD)	
Baseline	65.50 (4.39)	63.80 (4.25)	0.133
Immediate Post-Injection	46.10 (4.01)	49.90 (3.68)	<0.001
1st Month	37.20 (4.23)	43.73 (3.90)	<0.001
3rd Month	34.47 (4.14)	39.60 (3.76)	<0.001
P-Value	<0.001	<0.001	
Overall P- Value	<0.001		

Table 2: Demonstrating change in SPADI (%) over time



Demonstrating Association Between Group and Adverse Events

Conclusion

Conclusion: Hydrodilatation through Rotator cuff interval might be a better Mx. option for patients with AC, considering better outcome on improving pain & disability, improving ROM, cost-effectiveness, and feasibility of equipment when compared with the PRF of SSN.

References

- Neviaser RJ, Neviaser TJ. The frozen shoulder. Diagnosis and management. Clin Orthop Relat Res. 1987 Oct;(223):59-64.
- Zuckerman JD, Rokito A. Frozen shoulder: a consensus definition. J Shoulder Elbow Surg. 2011 Mar;20(2):322-5.