

ROLE OF ULTRASOUND GUIDED COMBINED INTRA-ARTICULAR INJECTION AND SUPRA-SCAPULAR NERVE BLOCK FOR PAIN CONTROL IN PATIENTS WITH FROZEN SHOULDER

Salah El Deen El Desouki Abo El Enien, Mohammed Mahmoud El Shafey, Omnia Ezz El Din Fathy AlSaadany, Rehab Abd-El Aal Elnemr,* Ebraheem Hassan Abo Bakr Shabaan
Department of Radiodiagnosis and Intervention, Department of Physical Medicine, Rheumatology and Rehabilitation,* Faculty of Medicine, University of Alexandria.

Introduction

Frozen shoulder, also known adhesive capsulitis, is a painful condition. Shoulder pain, as well as restrictions on both active and passive range of motion in every direction are the typical symptoms. Several treatment plans have been discussed in literature as rest, non-steroidal anti-inflammatory drugs (NSAIDs), active and passive mobilisation. Image guided intraarticular injections and suprascapular nerve block have recently been recognized methods in pain management of frozen shoulder particularly during painful stage as they help to alleviate the pain and reduce inflammation thus helping the patient to maintain more discipline to physiotherapy.

Aim of the work

The aim of this work was to test the efficacy of ultrasound guided combined intra-articular injection and supra-scapular nerve block in pain control in patient with frozen shoulder.

Patients and Methods

This study was carried out on 40 patients with painful frozen shoulder were randomly treated with either combined intra-articular steroid injection (IACSI) and suprascapular nerve block (SSNB) (n=20) or supra-scapular nerve block alone (SSNB) (n=20). Clinical response was assessed at 4 and 8 weeks post procedural interval compared to the baseline using visual analogue score (VAS) and oxford shoulder score (OSS).

Results

The VAS score and OSS score were significantly low in the combined group and SSNB group at 4 and 8 weeks after the procedure ($P < 0.001$ for all patients), When the two groups were compared according to changes in VAS and OSS from baseline at 4 and 8 weeks, combined group showed significant alleviation of pain ($P < 0.001$ for 4 and 8 weeks) and improvement in function ($P < 0.001$ for 4 and 8 weeks) compared to SSNB group.

Table : Comparison between combined IACSI and SSNB and SSNB groups according to decrease in VAS from baseline

Decrease in VAS	Combined (n = 20)	SSN (n = 20)	U	P
Baseline-4weeks				
Min. – Max.	3.50 – 5.50	1.50 – 5.0	44.0*	<0.001*
Mean $\pm$ SD.	4.80 $\pm$ 0.55	3.55 $\pm$ 0.90		
Median (IQR)	5.0 (4.50 – 5.0)	3.50 (3.0 – 4.25)		
Baseline-8 weeks				
Min. – Max.	4.0 – 4.0	1.50 – 5.0	38.50*	<0.001*
Mean $\pm$ SD.	4.90 $\pm$ 0.53	3.63 $\pm$ 0.92		
Median (IQR)	5.0 (4.50 – 5.25)	4.0 (3.0 – 4.25)		

U: Mann Whitney test

p: p value for comparison between the studied groups

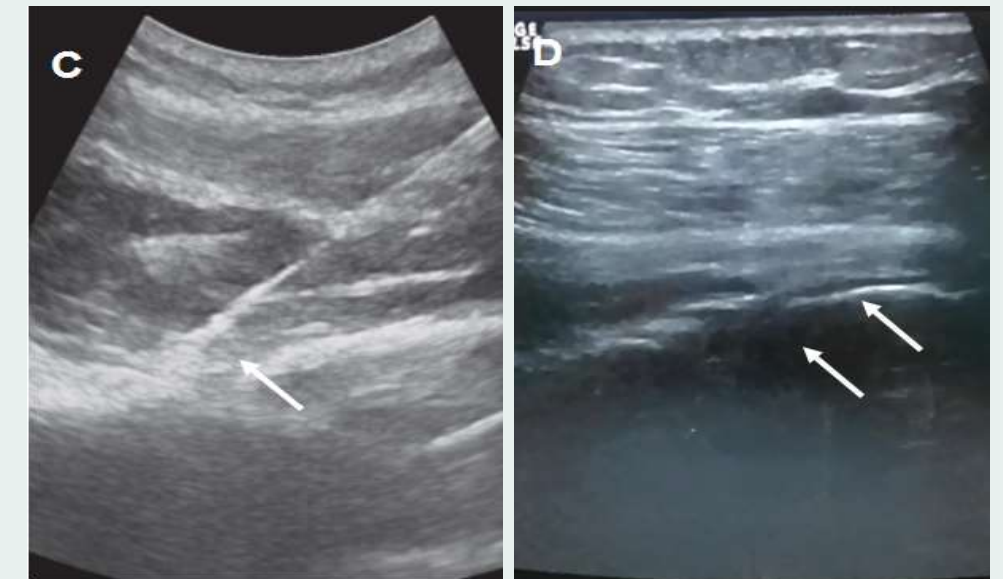


Figure: **A)** Ultrasound posterior view of the suprascapular fossa and its roof the transverse scapular ligament. The tip of the 22 gauge spinal needle is advanced with its tip seen in the trapezius muscle. **(B)** Introduction of the spinal needle through the trapezius muscle then suprascapular till it passes through transverse scapular ligament with tip seen in the suprascapular fossa. **(C)** Injection of the drug mixture and distention of the fossa is noted. **(D)** posterior view of the glenohumeral joint with introduction of the needle tip intra-articular with in the joint cavity

Conclusion

Both SSNB and IACSI are effective methods to relieve frozen shoulder pains. When compared to each other, combined group showed more significant pain relief and functional improvement than SSNB group.

