

Ultrasound-guided Intra-Ligamentous Injection Targeting the Coracohumeral Ligament Complex Shows Promise for Adhesive Capsulitis Management: A Case Series

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INTRODUCTION:

Hydrodilatation of the glenohumeral joint has emerged as a preferred intervention for adhesive capsulitis, offering a non-invasive management approach. The recognition of the coracohumeral ligament (CHL) complex's significance in shoulder stiffness has prompted surgical interventions such as CHL capsular release for refractory capsulitis and concurrent CHL release during arthroscopic cuff repair to enhance shoulder function. Recently, ultrasound-guided injections targeting the CHL have gained attention as a potential avenue for focused therapy.

METHODS:

We present three cases of idiopathic adhesive capsulitis, each with an average age of 59.3 years and a mean symptom duration of 6 months, all complicated by diabetes mellitus. Patients exhibited global restriction of active and passive shoulder motions, particularly external rotation. They subsequently underwent an ultrasound-guided suprascapular nerve block with followed by an intra-ligamentous combined injection of concentrated dextrose (40%), dexamethasone sulphate and lignocaine, targeting the pathological CHL.

RESULTS:

The treatment protocol yielded significant improvements in functional outcomes and pain relief among the study cohort. Shoulder Pain and Disability Index (SPADI) scores exhibited a notable average improvement of 26.2 points from baseline over 6 weeks, accompanied by a corresponding 5-point reduction in Visual Analogue Scale (VAS) pain scores. Incremental restoration of motion was observed. There were no

reported adverse complications. Patients revealed a high level of satisfaction with the treatment approach, consistently rating their overall experience at 5 points on a Likert scale by the conclusion of the 6-week follow-up period.

Patient	A	B	C
Age	59	56	63
Sex	Male	Female	Male
Duration of symptoms (mths)	6	7	5
Diabetes	Yes	Yes	Yes
Pain scores:			
VAS 0 week	7	8	7
VAS 2 weeks	4	4	5
VAS 6 weeks	2	3	2
SPADI 0 week	66.15	73.07	45
SPADI 6 weeks	36.1	33.85	36
SPADI improvement	+ 30.05	+ 39.2	+ 9
Satisfaction Likert 1-5	5	5	5
ROM 0 week	Abd 70, ER 30, FF 100	Abd 50, ER 20, FF 45	Abd 45, ER – 20, FF 60
ROM 2 weeks	Abd 100, ER, 35, FF 120	Abd 70, ER 30, FF 60	Abd 70, ER 0, FF 70
ROM 6 weeks	Abd 110, ER 45, FF 120	Abd 80, ER 33, FF 90	Abd 80, ER 10, FF 90

CONCLUSION:

Our findings suggest that an intra-ligamentous injection targeting the CHL, supplemented by suprascapular nerve block, offers a promising therapeutic option for adhesive capsulitis. Longer term follow-up and larger-scale studies are warranted to further elucidate the efficacy and durability of this approach.

REFERENCES:

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