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Effect of Physiotherapy Rehabilitation on Luxatio Erecta and Brachial Plexus Injury: A Case Study

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ABSTRACT

Introduction: The shoulder joint, comprising the Glenohumeral Joint (GHJ), scapulothoracic, sternoclavicular, and acromioclavicular joints, is highly mobile but vulnerable to injuries like luxatio erecta. These dislocations often involve soft tissue and bony damage, including brachial plexus injuries. With the help of this study we are focussing on restoring strength, stability, and mobility, with scapular stabilisation and nerve recovery with the help of conservative management.

Case Report: A 28-year-old male presented with a traumatic shoulder dislocation, exhibiting an adducted and internally rotated shoulder. Patient presented with pain, altered sensations, and impaired ability to perform Activities of Daily Living (ADLs). Magnetic Resonance Imaging (MRI) revealed a partial supraspinatus tendon tear, subacromial impingement, bursitis, glenohumeral effusion, and a Superior Labrum Anterior to Posterior (SLAP) tear. Nerve Conduction Velocity (NCV) studies confirmed brachial plexus neuritis affecting the C5-C6 trunk. Initial assessment included restricted Range of Motion (ROM) (10°-20°), weak muscle strength [Manual Muscle Training (MMT) 1/5], absent reflexes, altered sensation, severe pain [Visual Analogue Scale (VAS) 10], and limited functional independence (SPADI 93%, [Disabilities of the Arm, Shoulder and Hand (DASH) 95%] 95%).

A 4-month physiotherapy programme comprised:

Stage 1: Pain management, ROM exercises, and electrical stimulation.

Stage 2: Strength training and functional independence via isometric and Proprioceptive Neuromuscular Facilitation (PNF) exercises with electrotherapy.

Stage 3: Resistance training to enhance and maintain strength.

Stage 4: Scapular stabilisation and functional strength development.

Significant improvements included pain resolution (VAS 0), intact sensations, improved strength (MMT 4/5), reduced SPADI (40%) and DASH (32.5%) scores, better sleep, and enhanced quality of life.

Conclusion: Conservative physiotherapy effectively managed the shoulder dislocation, SLAP lesion, and brachial plexus injury, restoring mobility, strength, and function without surgical intervention.

Keywords: Activities of daily living, Conservative management, Inferior dislocation.

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