

FLOATING SHOULDER WITH BRACHIAL PLEXUS INJURY: A COMPLEX CASE OF NEURO-MUSCULOSKELETAL IMPAIRMENT

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Background

Floating shoulder is a complex injury typically resulting from high-energy trauma to the shoulder region, characterized by a fracture of the scapular neck and concurrent disruption of the coracoclavicular and coracoacromial ligaments. This traumatic pathology is potentially unstable and is frequently associated with neurovascular complications.

Case report

A 24-year-old male presented to the Emergency Department after a motor vehicle accident. Imaging revealed a comminuted fracture of the left scapula involving the neck, base of the spine, supraspinous and infraspinous fossae, and a grade IV acromioclavicular dislocation—consistent with a floating shoulder. Due to neurological deficits in the affected limb, brachial plexus and cervical spine MRI was performed, showing no structural abnormalities. The patient underwent orthopedic surgery without complications. Postoperatively, physiatric evaluation revealed scapular girdle atrophy, glenohumeral subluxation, absence of active shoulder muscle contraction and significant elbow movement limitation. A multidisciplinary rehabilitation program was initiated, including muscular electrical stimulation, passive mobilization, isometric strengthening, scapular kinematics retraining, and proprioceptive exercises. Six weeks post-trauma, electromyography identified injury to multiple branches of the left brachial plexus: suprascapular, musculocutaneous, axillary, and radial nerves. At six months, the patient showed mild improvement in muscle trophism and shoulder stability, with partial recovery of shoulder and elbow function.

Conclusion

This case illustrates the potential severity of floating shoulder injuries, particularly when compounded by brachial plexus involvement. A multidisciplinary approach—including early diagnosis, surgical stabilization, and targeted rehabilitation—is essential for optimizing functional outcomes and improving quality of life.

Keywords: Floating, Shoulder, Brachial, Plexus, Rehabilitation