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Effectiveness of Neuromuscular Exercise on Muscle Strength and Functional Ability among Chronic Anterior Shoulder Instability

Lavanya B[1], Shenbaga Sundaram Subramanian[2], Senthil Purushothaman[3]

[1]Undergraduate student, [2]Associate Professor, [3]Professor and Dean i/c, Chettinad School of Physiotherapy (CSP), Chettinad Hospital and Research Institute (CHRI), Chettinad Academy of Research and Education (CARE) Kelambakkam, Tamil Nadu, India.

Email Id: sssssselavanyabalu254@gmail.com

Abstract

Background of the study: The dislocation of the humeral head from the glenoid is known as shoulder instability. Atraumatic shoulder instability (ASI) is defined as aberrant humeral movement or posture in the glenoid fossa that, without a history of severe prior injury, results in recurring discomfort, subluxations, dislocations, and functional impairment. Proprioception is essential to sensorimotor control, especially within the shoulder complex, as joint stability is crucial for movement.

Methods: The setting is Chettinad Hospital and Research Institute. This study includes those between the ages of 18 and 39 years with trauma-initiated, unidirectional anterior shoulder instability, Primary or recurrent ASDs, self-reported decreased shoulder movements, and instability in grades 2 and 3. This study excludes humerus head fractures or bony Bankart lesions, prior surgery in the affected shoulder joint, and more than 5 ASDs in the patient's lifetime.

Results: Based on the analysis, pre-and post-test scores across four outcome measures (WOSI, AMS, ERMS, IRMS) showed significant differences between Group A and Group B in terms of reduction in WOSI scores and improvements in AMS, ERMS, and IRMS scores from pre-test to post-test. This denotes that neuromuscular exercise has significantly improved muscle strength and functional ability in people with chronic anterior shoulder instability.

Conclusion: The study concludes that neuromuscular exercise improves muscle strength and functional ability in chronic shoulder patients.