



Effect of eight weeks corrective exercises with Sahrman approach on shoulder stability and scapula-humeral rhythm in female volleyball players with scapular dyskinesia

Oral Presentation

1Zahra Pashaei * ; 2Seyed Mohammad Hosseini

¹M.A of Corrective Exercises and Sports Injuries, faculty of physical education and Sport Sciences, University of Guilan, Rasht, Iran(melikapashaei.4@gmail.com)

²Assistant Professor, Department of Sport Rehabilitation and Health, Faculty of Sport Sciences and Health, Shahid Beheshti University, Tehran, Iran

Abstract

Introduction: Changes in the position and movements of the scapula increase the incidence of shoulder dysfunction. Muscle imbalance has further been suggested to be a leading cause of asymmetrical motions and positions of scapula. The purpose of this study was to investigate the effect of eight weeks corrective exercises with Sahrman approach on shoulder stability and scapula-humeral rhythm in female volleyball players with scapular dyskinesia

Methods: The present research was a semi-experimental study with pre-test and post-test design. The statistical sample of the present study were 30 female volleyball players with scapular abduction movement impairments. At first, 30 players with scapular abduction were selected and randomly divided into two equal groups of 15, experimental and control group. The weighted abduction and flexion task of the scapular dyskinesia test, Kibler lateral scapula slide test and Scapulohumeral rhythm were applied to classify subjects with scapular abduction impairment. Before and after 8 weeks exercises, the functional stability and scapulohumeral rhythm were evaluated. The Y-Balance test upper quarter (YBT-UQ), seated medicine ball throw (SMBT) and closed kinetic chain upper extremity stability test (CKCUEST) were used to measure the functional stability of the upper extremity. The scapulohumeral rhythm at 4 positions (0, 45°, 90°, and 135°) was assessed using inclinometer. Paired sample t-test was used to compare the pretest to posttest and independent t-test was run to compare the differences between the two groups with the significance level set at 0.05.

Results: The results showed that after 8 weeks training, there were significant changes in the scapulohumeral rhythm 0°_45° (p= 0/001), 45°_90°(p= 0/017) and 90°_135°(p= 0/002). Also, scores in functional stability (p= 0/023) and seated medicine ball throw (p= 0/048) increased significantly after training program in experimental group. The effect was not significant in the closed kinetic chain upper extremity stability test (p=0.237).
Conclusion: In the current study, the focus of the corrective exercises protocol was on scapulohumeral rhythm correction and its effects on functional stability improvement. The scapulohumeral rhythm and functional stability improved after impairments correction. So, this protocol can be recommended as an effective protocol to improve alignment and function in the overhead athletes with scapular abduction impairment.

Keywords

Scapula; corrective exercises; Sahrman; volleyball; Scapula humeral rhythm

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