The effects of 4 weeks rhythmic stabilization exercise on proprioception, range of motion, muscle strength and functional stability of shoulder in girl's swimmers with impingement syndrome

Oral Presentation

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Abstract
Introduction: Shoulder impingement syndrome is one of the most common shoulder injuries, which accounts for pain, decreasing the proprioception, muscle strength, and range of motion as well as decrease in the quality of life [1]. Rhythmic stabilization exercises is designed for improving movement control and joint stability [2] but there is lack of evidence for its effects on the shoulder impingment syndrome therefore the aim of this study was to investigate the effects of 4 weeks rhythmic stabilization exercise on proprioception, range of motion, muscle strength and functional stability of shoulder in girl's swimmers with impingement syndrome.
Methods: Thirty swimmer girls with shoulder impingement syndrome were randomly divided into experimental and control groups. Rhythmic stabilization exercises were performed for 4 weeks. Goniometer, manual muscle test and Upper Quarter Y Balance Test were used for measurement of proprioception, range of motion, muscle strength and functional stability of shoulder joint, respectively. Measurements results were tested with paired sample t-test and independent sample t-test using SPSS version 22 with α=0.05.
Results: The results indicated that position sense as an indication for proprioception, shoulder internal and external rotation muscle strength, and functional stability of the shoulder joint were significantly improved in the experimental group, compared to their pre-tests and the control group's post-tests. But there was no significant difference in the internal and external rotation range of motions between the two groups.
Conclusion: It seems that, rhythmic stabilization exercises can apparently be used in order to improve the state of people suffering from shoulder impingement syndrome.

Keywords
Functional instability; Rhythmic stabilization exercise; impingement syndrome

Reference:

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