



The relationship between postural control changes and self-reported function after a 6-week of wobble board training in female athletes with a chronic ankle sprain

Poster Presentation

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Abstract

Introduction: Ankle instability is one of the consequences of ankle sprains and is associated with impaired neuromuscular control. Lateral ankle sprain is one of the most common injuries among athletes and in the general population, with an estimated daily injury rate of 1 in 10000 people (Gribble & Robinson, 2009). This study aimed to investigate the relationship between postural control changes and self-reported function in people with chronic ankle sprains after a 6-week wobble board training.

Methods: Thirty female athletes between 18-30 years with chronic ankle sprain participated in this study and were randomly assigned to a training group (n=15) and a control group (n=15). The training program consisted of a 6-week wobble board training. Self-reported function was measured using AJFAT, CAIT, FAAM and FAOS (Martin, Hutt, Wukich, & international, 2009). Postural control was measured by Standing on one leg, BESS, Anterior Y, Total Y, Posterior Medial Y, Posterior Lateral Y. Shapiro-Wilk test was used to examine the data distribution of both groups, and Pearson correlation test was used to determine the relationship between postural control changes and self-reported function changes after exercise.

Results: The achieved results showed that after a 6-week balance training, there was a significant relationship between self-reported function and postural control ($P<0.05$). The results of intragroup analysis of variance test with repeated measures on the time factor showed that balance exercise has a significant effect on performance assessed by balance tests in people with chronic ankle instability in the exercise group, but no difference was observed in the control group.

Conclusion: Six weeks wobble board training and detraining effect postural control and function. Also, after 6-week wobble board training, significant relationship in self-reported function and postural control was seen.

Keywords

Ankle sprain; Postural control; self-reported function

Reference:

1. Gribble, P. A., & Robinson, R. H. (2009). Alterations in knee kinematics and dynamic stability associated with chronic ankle instability. *Journal of athletic training*, 44(4), 350-355.
2. Hertel, J. (2002). Functional anatomy, pathomechanics, and pathophysiology of lateral ankle instability. *Journal of athletic training*, 37(4), 364.
3. Martin, R. L., Hutt, D. M., Wukich, D. K. J. F., & international, a. (2009). Validity of the Foot and Ankle Ability Measure (FAAM) in diabetes mellitus. 30(4), 297-302.
4. Yeung, M., Chan, K.-M., So, C., & Yuan, W. J. B. j. o. s. m. (1994). An epidemiological survey on ankle sprain. 28(2), 112-116.