Relation of sole arch index and static balance in female athletes with lower-extremity injury

Darzi Sheikh Z (M.Sc)*¹, Ghorbani Marzooni M (M.Sc)²

¹Ph.D Candidate in Corrective Exercise, Department of Health and Movement, School of Sport Medicine, University of Tehran, Tehran, Iran. ²Academic Instructor, Ph.D Candidate in Motor Development, Faculty of Physical Education and Sport Sciences, Mazandaran University, Babolsar, Iran.

Abstract

**Background and Objective:** By increasing the number of athletes, sports-related injuries are increased and of those lower extremities injuries are more common. This study was done to evaluate the relation of sole arch index and static balance in female athletes with lower-extremity injury.

**Methods:** This case – control study, was done on 18 female athletes without a history of lower extremity injury which were considered as controls and 18 female athletes with a history of lower extremity injury in past two years which were considered as cases. Static balance and sole arch index were evaluated using stork stand and Chippaux-Smirak index tests.

**Results:** Static balance with open eyes was 16.10 seconds and 26.53 seconds in cases and controls (P<0.05), whereas, there was no significant difference in static balance with closed eyes and sole arch index between cases and controls.

**Conclusion:** Poor static balance with neuromuscular control deficit can consider as lower extremity injury in female athletes.

**Keywords:** Static balance, Sole arch index, Lower-extremity injury, Female athletes

* Corresponding Author: Darzi Sheikh Z (M.Sc), E-mail: zdarzi@ut.ac.ir

Received 4 Feb 2014  Revised 30 Aug 2014  Accepted 14 Oct 2014