Longer reaction time of the fibularis longus muscle and reduced postural control in basketball players with functional ankle instability: A pilot study.

Gatica-Rojas V[1], Cartes-Velásquez R[2], Méndez-Rebolledo G[1], Guzman-Muñoz E[3], Lizama LEC[4].

AUTHOR INFORMATION

1 Exercise Science Laboratory, School of Kinesiology, Faculty of Medicine, Finis Terrae University, Av. Pedro de Valdivia 1509, 7500000 Santiago, Chile; Human Motor Control Laboratory, Faculty of Health Sciences, University of Talca, Av. Lircay s/n, 3460000 Talca, Chile. Electronic address: gmendez@utalca.cl.

2 Exercise Science Laboratory, School of Kinesiology, Faculty of Medicine, Finis Terrae University, Av. Pedro de Valdivia 1509, 7500000 Santiago, Chile; School of Kinesiology, Faculty of Health, Santo Tomas University, Av Carlos Schörr 255, 3460000 Talca, Chile. Electronic address: eguzmanm@santotomas.cl.

3 Human Motor Control Laboratory, Faculty of Health Sciences, University of Talca, Av. Lircay s/n, 3460000 Talca, Chile. Electronic address: vgatica@utalca.cl.

4 Exercise Science Laboratory, School of Kinesiology, Faculty of Medicine, Finis Terrae University, Av. Pedro de Valdivia 1509, 7500000 Santiago, Chile. Electronic address: hzbinden@uft.cl.

ABSTRACT

BACKGROUND:
Motor control evaluation in subjects with functional ankle instability is questionable when both ankles of the same subject are compared (affected vs non-affected).

OBJECTIVE:
To compare the postural control and reaction time of ankle muscles among: basketball players with FAI (instability group), basketball players without FAI (non-instability group) and healthy non-basketball-playing participants (control group).

DESIGN: Case-control study.

SETTING: Laboratory.

PARTICIPANTS:
Instability (n = 10), non-instability (n = 10), and control groups (n = 11).
MAIN OUTCOME MEASURES:
Centre of pressure variables (area, velocity and sway) were measured with a force platform. Reaction time of ankle muscles was measured via electromyography.

RESULTS:
A one-way ANOVA demonstrated that there were significant differences between the instability and non-instability groups in the fibularis longus ($p < 0.001$), fibularis brevis ($p = 0.031$) and tibialis anterior ($p = 0.049$) muscles. Repeated-measures ANOVA and post hoc analysis determined significant differences for the area between the instability and non-instability groups ($p = 0.001$).

CONCLUSION:
Basketball players with FAI have reduced postural control and longer reaction time of the fibularis and tibialis anterior muscles.
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