

**Balance Training on Ankle Joint Position Sense in Lateral Ankle Ligament Injury of Athletes**

Deivendran Kalirathinam<sup>1</sup>, Mohamed Saat Bin Ismail<sup>2</sup> and Hairul Anuar Hashim<sup>2</sup>

<sup>1</sup>Faculty of Medicine and Health Sciences, Department of Physiotherapy, Universiti Tunku Abdul Rahman, Sungai Long Campus, Jalan Sungai Long, Bandar Sungai Long, Cheras-43000, Kajang, Selangor, Malaysia.

<sup>2</sup>School of Health Sciences, Health Campus, Universiti Sains Malaysia, Kubang Kerian-16150, Kelantan, Malaysia.

Corresponding author email: [deivendran@utar.edu.my](mailto:deivendran@utar.edu.my)

INTERNATIONAL CONFERENCE ON RECENT TRENDS IN HUMANITIES AND SCIENCE 2018, 'ICRTHS-2018'.

UNIVERSITI TUNKU ABDUL RAHMAN, BANDAR BARAT, 31900 KAMPAR, PERAK, MALAYSIA.

26TH OCTOBER 2018.

American J of Bio-pharm Biochem and Life Sci 2014 December, Vol. 6: OP07

**ABSTRACT**

Multimodal balance training is often the first choice of treatment in patients with grade II lateral ligament ankle injury; however, the effect of exercise on ankle proprioception is under debate. We investigated the effect of 12-week multimodal balance training on ankle joint position sense using position-reposition test in subjects with grade II lateral ankle ligament injury. This randomized controlled clinical trial; fifty-two young recreationally active athletes with grade II lateral ligament ankle injury who randomised to either a Group A (n=13), Group B (n=13) Group C (n=13) and Group D (n=13). Subjects in the all groups were trained on the affected limb with static and dynamic components using the therapeutic equipment. The passive ankle joint position sense at 15° and 30° of ankle inversion/eversion on the affected limbs were measured at pre, mid, post and follow-up intervention using a bio-dex isokinetic dynamometer 4pro. Mean errors were compared between pre, mid, post and follow-up intervention using repeated measures of ANOVA. At baseline, the significant difference in the mean errors for all subjects was observed only at 30° of ankle inversion/eversion. Just the combined intervention group showed a substantial reduction in mean error on the injured limb following intervention at both 15° of ankle inversion/eversion. At post-intervention, the decrease in mean error in the involved leg was significantly higher in the combined intervention group than other groups at 30° of ankle inversion (P = 0.002). A significant difference in the mean error was observed at 30° of ankle inversion/eversion.