

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

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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.