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Comparison of the Effect of Semi-Rigid Ankle Bracing Performance among Ankle Injured Versus Non-Injured Adolescent Female Hockey Players

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Abstract : Objectives: To determine the comparative proprioceptive performance of injured versus non-injured adolescent female hockey players when wearing an ankle brace. Methods: Data were collected from 100 high school players who belonged to the Highway Secondary School KZN Hockey league via voluntary parental informed consent and player assent. Players completed an injury questionnaire probing the prevalence and nature of hockey injuries (March-August 2013). Subsequently players completed a Biodex proprioceptive test with and without an ankle brace. Probability was set at $p \leq 0.05$. Results: Twenty-two players sustained ankle injuries within the six months ($p<0.001$). Injured players performed similarly without bracing Right Anterior Posterior Index (RAPI): 2.8±0.9; Right Medial Lateral Index (RMLI): 1.9±0.7; Left Anterior Posterior Index (LAPI) LAPI: 2.7; Left Medial Lateral Index (LMLI): 1.7±0.6) as compared to bracing (RAPI: 2.7±1.4; RMLI: 1.8±0.6; LAPI: 2.6±1.0; LMLI: 1.5±0.6) ($p>0.05$). However, bracing (RAPI: 2.2±0.8; RMLI: 1.5±0.5; LAPI: 2.4±0.9; MLI: 1.5±0.5) improved the ankle stability of the non-injured group as compared to their unbraced performance (RAPI: 2.5±1.0; RMLI: 1.8±0.8; LAPI: 2.8±1.1; LMLI: 1.8±0.6) ($p<0.05$). Conclusion: Ankle bracing did not enhance the stability of injured ankles. However ankle bracing has an ergogenic effect enhancing the stability of healthy ankles.

Keywords : hockey, proprioception, ankle, bracing
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