

Acute Effect of Thumb Spica Taping on Grip Strength and Endurance in Professionals Handball Player: A Pilot Study

Serdar Demirci¹, Tuğçe Kalaycıoğlu², Gül Baltacı¹

¹Hacettepe University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Ankara, Turkey; ²Eastern Mediterranean University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Famagusta, North Cyprus

Objectives: Thumb metacarpophalangeal (MCP) joint injury is frequently seen due to dynamic character of handball game. Spica taping is generally applied to protect thumb during returning to sports activities following rehabilitation in handball player. The aim of this study was to investigate the effect of spica taping on grip strength and grip endurance in professional handball players.

Methods: Thirteen female handball players who was playing in Turkey Handball Federation Super League participated in the study. Mean age was 25.23±5.47 years, mean age of beginning to sports was 13.15±5.62 years, mean body mass index was (BMI) 22.38±2.74 kg/cm². Hand grip strength and grip endurance in dominant side were evaluated before and after spica taping. “Jamar Hand Dynamometer” was used to assess hand grip strength. Grip endurance was measured in seconds during half of average grip strength sustaining for each players. All assessments were applied while sitting during shoulder adduction and neutral rotation with 90° elbow flexion, forearm midrotation, and neutral wrist position. Measurements were repeated 3 times and average values were recorded.

Results: There was a statistically significant difference in grip strength between before and after spica taping application ($p<0.001$). There was a statistically difference in grip endurance between before and after spica taping application ($p<0.001$).

Conclusion: Our results demonstrated that thumb spica taping is effective in improving grip strength and grip endurance in handball players. We suggest that supporting thumb stabilization without limiting hand functions might protect the MCP joint, and contribute injury prevention accompanying with improving sports performance. Consequently, thumb taping is recommended to handball players before competition.

The Orthopaedic Journal of Sports Medicine, 2(11)(suppl 3)

DOI: 10.1177/2325967114S00286

©The Author(s) 2014