World Academy of Science, Engineering and Technology
International Journal of Bioengineering and Life Sciences
Vol:11, No:08, 2017

Preliminary Report on the Assessment of the Impact of the Kinesiology Taping Application versus Placebo Taping on the Knee Joint Position Sense

Authors : Anna Hadamus, Patryk Wasowski, Anna Mosiolek, Zbigniew Wronski, Sebastian Wojtowicz, Dariusz Bialoszewski

Abstract : Introduction: Kinesiology Taping is a very popular physiotherapy method, often used for healthy people, especially athletes, in order to stimulate the muscles and improve their performance. The aim of this study was to determine the effect of the muscle application of Kinesiology Taping on the joint position sense in active motion. Material and Methods: The study involved 50 healthy people - 30 men and 20 women, mean age was 23.2 years (range 18-30 years). The exclusion criteria were injuries and operations of the knee, which could affect the test results. The participants were divided randomly into two equal groups. The first group consisted of individuals with the applied Kinesiology Taping muscle application (KT group), whereas in the rest of the individuals placebo application from red adhesive tape was used (placebo group). Both applications were to enhance the effects of quadriceps muscle activity. Joint position sense (JPS) was evaluated in this study. Error of Active Reproduction of the Joint Position (EARJP) of the knee was measured in 45° flexion. The test was performed prior to applying the patch, with the applied application, then 24 hours after wearing, and after removing the tape. The interval between trials was not less than 30 minutes. Statistical analysis was performed using Statistica 12.0. We calculated distribution characteristics, Wilcoxon test, Friedman's ANOVA and Mann-Whitney U test. Results. In the KT group and the placebo group average test score of JPS before applying application KT were 3.48° and 5.16° respectively, after its application it was 4.84° and 4.88°, then after 24 hours of experiment JPS was 5.12° and 4.96°, and after application removal we measured 3.84° and 5.12° respectively. Differences over time in any of the groups were not statistically significant. There were also no significant differences between the groups. Conclusions: 1. Applying Kinesiology Taping to quadriceps muscle had no significant effect on the knee joint proprioception. Its use in order to improve sensorimitor skills seems therefore to be unreasonable. 2. No differences between applications of KT and placebo indicates that the clinical effect of stretch tape is minimal or absent. 3. The results are the basis for the continuation of prospective, randomized trials of numerous study groups.

Keywords : joint position sense, kinesiology taping, kinesiotaping, knee
Conference Title : ICPLP 2017 : International Conference on Physiotherapy and Life Physics
Conference Location : Amsterdam, Netherlands
Conference Dates : August 07-08, 2017