

Effects of Kinesio Taping on Postural Stability in Young Soccer Players

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Abstract : Purpose: The aim of this study is to investigate the effects of Kinesio taping on postural stability and in young soccer players. Subjects and Methods: 62 volunteered soccer players from Cayyolu Sports Club were included in our study. Permissions were also taken from the club directors about the inclusion of their players to our study. Soccer players between the age of 12 and 16 were included in our study. Players that had previous injury on lower extremities were excluded from the study. Players were randomly divided into two groups: Kinesio taping (KT) (n=31), and control group (n = 31). KT application including gastrocnemius and quadriceps femoris muscle facilitation techniques were applied to the first group. A rest time for 45 minutes was given in order to see the best effectiveness of the tape. The second group was set as the control group and no application was made. All participants were assessed before the application and 45 minutes later. In order to provide the double-blind design of the study, an experienced physiotherapist has done the assessments and another experienced physiotherapist has done the taping. The patients were randomly assigned to one of the two groups using an online random allocation software program. Postural stability was assessed by using Tetrax Interactive Balance System. Thermographic assessment was done by using FLIR E5 (FLIR Systems AB, Sweden) thermal camera in order to see which muscles have the most thermal activity while maintaining postural stability. Results: Statistically significant differences were found in all assessment parameters in both Kinesio Taping and control groups (all $p < 0.05$) except thermal imaging of dominant gastrocnemius muscle results ($p = 0.668$) (Table 1). In comparison of the two groups, statistically significant differences were found in all parameters (all $p < 0.05$). Conclusion: In this study, we investigated the effects of Kinesio taping on postural stability in young soccer players and found that KT application on Quadriceps and Gastrocnemius muscles may have decreased the risk of falling more than the control group. According to thermal imaging assessments, both Quadriceps and Gastrocnemius muscles may be active in maintaining postural stability but in KT group, the temperature of these muscles are higher which leads us to think that they are more activated.

Keywords : Kinesio taping, fall risk, muscle temperature, postural stability

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