Effects of proprioceptive new-generation strapping on maintaining the standing position

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Keywords: Kinesio-Tape; Proprioception; Stability

Aim.– The first goal of this study (A) was to observe the effects of Kinesio-Taping (KT) applied to the Triceps Surae on the standing posture. The second aim was to compare these effects to a Classical Strap (CS).

Material.– A baropodometric platform (Medipac) and a sampling frequency: 100 Hz) allowing to record the plantar pressure repartitions (%).

Methods.– The participants were asked to maintain a preferential standing position during 3 x 30s [1], according to the following modalities: (A): “barefoot” (control condition), “with KT”, and “with SC”; (B): “KT” and “KT after 48–72”, “SC” and “SC after 48–72 h”.

Results.– Experiment A revealed a significant increase in right plantar pressures [F(2, 21) = 2.59; P = .00] from barefoot to KT. Besides, a significant increase in sole plantar pressure was observed from KT to SC [F(2, 21) = 3.65; P = .00]. However, KT and SC were not significantly different each other (P > .05). Experiment B showed an increase in left side plantar pressure 48–72 h after KT application, and no effect after 48–72 h of KT application in both anterior-posterior and mediolateral axes.

Discussion.– The use of KT, for Gastrocnemius tonus harmonization aims, induced a relocation in the frontal plane (A) of the plantar pressure which is maintained after 48–72 hours (B) [2], whereas SC seems to have more mechanical [3] than proprioceptive effect. This mechanical effect was observed as a posterior to anterior blocking phenomena, which could be followed by a mid-term frontal re-equilibration owing to results of B. To conclude, KT and SC are two therapies with different but complementary aims depending on either stabilization or proprioceptive goals.

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