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Effects of kinetic flossing technique on shoulder flexibility and functional performance

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Background: Soft tissue elasticity is a critical parameter both for prevention of musculoskeletal injuries and for maximizing athletic performance. A novel therapeutic technique that has been used by sports physiotherapist and trainers in order to improve soft tissue flexibility is the flossing technique. Flossing technique involves the compressive application of a latex band wrapped around of a joint or a muscle group and the simultaneous passive or active mobilization of the joint. In the practical setting, it could be applied during passive/active or functional tasks to regain range of motion and improve functional capacities. The present study aimed to evaluate the efficiency of a novel flossing technique the kinetic flossing in improving shoulder range of motion and functional performance in amateur athletes.

Methods: 20 amateur athletes ranged from 18-25 years old were randomly assigned into two groups receiving shoulder treatment with kinetic flossing bands or served as controls. Measurements included evaluation of the glenohumeral passive range of motion like flexion, extension, internal and external rotation and examination of shoulder functionality using the functional throwing performance index (FTPI). The measurements were applied before, immediately after and after five hours of the intervention. The treatment protocol included three sets of two and half minutes of passive and active mobilization of the shoulder, one minute passive/active shoulder flexion extension, internal-external rotation and FTPI 1.5 minutes. The experimental group had the kinetic flossing band applied according to the company's instructions to the dominant shoulder during each set of intervention while the control group did not wear any flossing band.

Results: Both groups showed improvements in range of motion (ROM) and functionality of the shoulder. Nevertheless, the group that received the kinetic flossing application showed significantly improved shoulder Internal rotation ROM ($p=0.000$) in comparison with the control group as in figure 1. Furthermore, the findings of the FTPI measurements showed statistically significant gains for the kinetic flossing group ($p=0.001$) compared with the control group as in figure 2.

Conclusion: Soft tissue flossing technique could be a useful and effective therapeutic procedure for the improvement of the ROM and the functional performance of the glenohumeral joint in amateur athletes.

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