Introduction

Passive stiffness is an important mechanical property of muscles. It is known that changes in mechanical properties of muscles, including muscle passive stiffness are the major cause of movement dysfunction\(^1\). The pompage is an osteopathic myofascial technique\(^3\) that is widely used in clinical practice. Studies analyzing the effects of pompage technique in mechanical properties of muscles are practically nonexistent. Considering the myofascial force transmission that can occurs in musculoskeletal system\(^4,5\), the objective of this study is investigate the effects of pompage technique in ankle passive stiffness.

Materials and methods

This study is a pilot research, with a longitudinal pre and post design. Ankle passive stiffness was measured in ten health subjects (5 men and 5 women) by an isokinetic dynamometer, in the passive mode of operation, before and after the pompage technique application. Electromyografic activity of both lower leg limbs was monitorated to guarantee that tests occur passively. The pompage technique was applied in one of the legs at random. The other leg was the control. The data was analyzed by descriptive statistic and ANOVA tests.

Results

The mean age of the subjects was 32.6 years (±3.2) and the mean weight was 71.40 kg (±13.97). The ANOVA for mean passive stiffness during plantar flexion showed no differences for the main effects leg (p=0.472), condition (pre and post) (p=0.098) and for the interaction effect leg x condition (p=0.075). The ANOVA for mean passive stiffness during dorsiflexion showed no differences for the main effects leg (p=0.105), condition (pre and post) (p=0.060) and for the interaction effect leg x condition (p=0.163).

Conclusion

These preliminary results showed no effects of pompage technique in ankle passive stiffness. These results may be caused by the reduced number of the sample. It is necessary to increase the number of subjects to be evaluated for one to observe the real effect of pompage technique in ankle passive stiffness.

References

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