INTRODUCTION: Self-Myofascial Release is receiving increased attention in physical therapy as well as in sports. The aim of this study is to compare the practicality and effectiveness of two tool-assisted self-myofascial release tools.

METHODS: Sixty (60) male athletes were nonrandomized into two groups for performing a myofascial self-help treatment on the quadriceps muscle (QM) and the iliotibial band (ITB): The Shearing Group (N=30) used the Fascia-ReleaseZer® tool (a myofascial release tool combined with a vibrational oscillation) and the Rolling Group (N=30) utilized a conventional pin roller. Both groups treated their right thighs only for eight minutes. Both thighs were assessed before and after the intervention with the non-treated left thigh serving as an additional control condition. Position, posture and treatment protocols were standardized in both groups. The objective parameters of stiffness, elasticity (MyotonPRO) and hydration (BIA 101 Anniversary SE) were measured before and after the brief interventions. Statistical analysis included the paired t-test, Wilcoxon signed rank test and Cohen’s d-test.

RESULTS: Both interventions produced significant decreases in the target thighs in stiffness (p<0.001): Shearing—9.1% for QM and 7.7% for ITB; Rolling—4.3% for QM and 2.6% for ITB, as well as significant increases in elasticity, but only in the quadriceps muscle (p<0.001): Shearing—6.1% for QM and 2.7% for Rolling QM. Elasticity was not changed appreciably in the ITB by either intervention. The local temperature of the treated muscles increased significantly (p<0.001) for both conditions—8.6% for Shearing and 3.5% for Rolling. Bioimpedance scores indicated a significant increase in hydration for the treated thigh, but only in the shearing group: increase of 1.8%, p<0.001. Finally, total hydration was observed to be significantly correlated with reductions in stiffness.

CONCLUSIONS: Application of self-help treatment with two tested self-myofascial manipulation tools resulted in significant improvements in the objective biomechanical tissues in both groups and in the hydration properties only in the shearing group. Further research is warranted to better understand the mechanisms and physiological basis of Self-Myofascial Release and test these procedures on clinical populations.

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