ABSTRACT

There has been a growing popularity in a technique similar to a massage that is easily accessible known as self-myofascial release, or more commonly as “foam rolling”. While research has been conducted to examine the effectiveness of foam rolling either, little research has been conducted regarding the use of foam rolling in conjunction with the use of foam rolling. The present study investigated the acute effects of deep tissue self-myofascial release on hip range of motion and fatigue rate of the quadriceps in uninjured individuals. METHODS: Nineteen males, ages 20-35, with no prior knee surgery/injury on their preferred leg regardless of current functional status were recruited. Subjects were allowed familiarity trials for goniometry and performed a warm-up on a stationary bicycle for 5 minutes. The following measurements were taken at rest and after the warm-up: height and body mass. The Acute Effects of Self-Myofascial Release on Hip Range of Motion (STS), self-myofascial release (SMR), and control treatment (CON) on hip range of motion, absolute/relative peak torque development, and fatigue rate. Friedman ANOVA was used to analyze for differences between trials (STS, SMR, CON) in perceived fatigue. If needed, appropriate post-hoc tests were used to make all pairwise comparisons for specific differences across the three experimental trials at time points. The experimentwise error rate (α=0.05) was maintained throughout all post-hoc tests for specific differences.

RESULTS.

There was no significant difference between the treatments on fatigue rate (p=0.6330) and perceived fatigue (p=0.6330).

CONCLUSIONS

Self-myofascial release is typically used as a recuperation modality for athletes to allow their body to endure vigorous training regimes. However, this technique is becoming more commonly used as a warm-up protocol prior to an exercise bout. While quadriceps strength, fatigue, and perceived fatigue did not differ between the treatments, the results of the study indicated that deep tissue SMR had a significant impact on hip flexion and extension over the control treatment (CON), but did not differentiate over the STS treatment. Additionally, with the results of this study and other studies, self-myofascial may be used as a form of pre-exercise warm-up without detrimental effect on athletic performance, and beneficial in activities that require optimal range of motion. Further investigation is warranted to examine the long term effects of self-myofascial release on range of motion of a joint compared to the traditional static stretching.

REFERENCES