Effects of Myofascial Induction on mobility and motor control in Head and neck cancer survivors. A randomized, crossover, and single blind study.

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Introduction

Temporomandibular disorders may appear as a consequence of the radiotherapy and surgery in patients with head and neck cancer. They may also suffer a decrease on cervical range of motion (ROM) and neck deep flexor endurance muscles. Myofascial induction (MI) is a manual therapy approach focused on the functional restoration of the altered fascial system.

Aim

The aim of the study was to demonstrate the short term effectiveness of myofascial induction treatment against a placebo session over mandibular and cervical mobility, and on craniocervical motor control in head and neck cancer survivors.

Materials and methods

A pilot randomized, controlled, cross-over design and simple blind was performed. Twelve head and neck cancer survivors (mean age: 59,83 ± 10,69) from the Maxillofacial Service at the Virgen de las Nieves Hospital (Granada, Spain), participated on the study. Mouth opening was assessed and a goniometer was used to evaluate ROM of cervical flexion, extension, rotations and inclinations, immediately after treatment. Deep neck flexor endurance test was performed and recorded in seconds. The intervention treatment was based on MI techniques. Placebo therapy consisted on an unplugged electrotherapy application. Interactions and comparisons between groups were determined using the IBM SPSS Statistics 21 program.

Results

The results of the ANCOVA revealed no statistical significant differences for the interaction in the range of cervical flexion (P=.068). However significant positive changes were observed in mandibular opening (P=.012), extension (P<.001), cervical rotations (towards non affected side: P=.006; towards affected side: P= .008) and inclinations (towards affected side: P=.001; towards non-affected side: P=.001); as well as for craniocervical flexion (P=.010) after physiotherapy treatment when compared to the control session.

Conclusions

One session of myofascial induction treatment increases mandibular opening, cervical mobility and craniocervical motor control, in head and neck cancer survivors, when compared to a placebo intervention. Larger studies and follow-ups are needed to ensure the results.