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Effects of far-infrared irradiation on myofascial neck pain: a randomized, double-blind, placebo-controlled pilot study.

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Abstract

OBJECTIVES: The objective of this study was to determine the relative efficacy of irradiation using a device containing a far-infrared emitting ceramic powder (cFIR) for the management of chronic myofascial neck pain compared with a control treatment.

DESIGN: This was a randomized, double-blind, placebo-controlled pilot study.

PARTICIPANTS: The study comprised 48 patients with chronic, myofascial neck pain.

INTERVENTION: Patients were randomly assigned to the experimental group or the control (sham-treatment) group. The patients in the experimental group wore a cFIR neck device for 1 week, and the control group wore an inert neck device for 1 week.

MAIN OUTCOME MEASUREMENT: Quantitative measurements based on a visual analogue scale (VAS) scoring of pain, a sleep quality assessment, pressure-pain threshold (PPT) testing, muscle tone and compliance analysis, and skin temperature analysis were obtained.

RESULTS: Both the experimental and control groups demonstrated significant improvement in pain scores. However, no statistically significant difference in the pain scores was observed between the experimental and control groups. Significant decreases in muscle stiffness in the upper regions of the trapezius muscles were reported in the experimental group after 1 week of treatment.

CONCLUSIONS: Short-term treatment using the cFIR neck device partly reduced muscle stiffness. Although the differences in the VAS and PPT scores for the experimental and control groups were not statistically significant, the improvement in muscle stiffness in the experimental group warrants further investigation of the long-term effects of cFIR treatment for pain management.

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