

DISSERTATION DEFENSE: LETTICIA CRISTINA SANTOS CARDOZO ROQUE

DATE: August 25, 2020

TIME: 8:30 am

PLACE: By Google Meeting

TITLE: EFFECTIVENESS OF ARTICULAR MOBILIZATION AND KINESIOTHERAPY ON THE HAND FUNCTIONALITY OF PATIENTS WITH SYSTEMIC SCLEROSIS: a controlled and randomized clinical trial

Keywords: Systemic sclerosis, Scleroderma, Joint manipulation, Kinesiotherapy, Physiotherapy

WORDS: 459

ABSTRACT:

Systemic sclerosis (SSc) is a chronic autoimmune disease characterized by vascular dysfunction and fibrosis of the skin and organs. It presents an important impairment of the functionality of the hands due to thickening of the skin, arthritis, myopathy and presence of ulcers. Pharmacological treatment is symptomatic and physical therapy works to improve function. In physiotherapy, we use joint mobilization to increase the range of motion and kinesiotherapy in order to recover and maintain physical capacity. The aim of this study was to verify the effectiveness of joint mobilization and kinesiotherapy on the functionality of the hands in patients with SSc, as well as to analyze the effect on disability, grip strength, pain, quality of life and range of motion of the hands. This study consisted of a randomized, controlled and blinded clinical trial for the evaluator. Inclusion criteria were: diagnosis of SSc (ACR / EULAR 2013 criteria), age ≥ 18 years and score on the Cochin Hand Functional Scale (COCHIN) ≥ 10 . Exclusion criteria: overlap with rheumatological diseases, scleroderma-like diseases, acute arthritis, myositis or ulcers in active hands, amputation of the fingers, physiotherapy in the last three months or inability to attend treatment sessions. The primary outcome was the functionality assessed by the COCHIN scale. Secondary outcomes: disability (Scleroderma Health Assessment Questionnaire-SHAQ), pain (visual analog scale), mobility (Modified Hand Mobility in Scleroderma- HAMIS and Delta finger-to-palm-DFTP), grip strength, quality of life (SF12), side effects and global perception of change (PGIC). 24 patients were included, who were randomized and allocated to the Physiotherapy Group (FG) or Control Group (CG). The FG performed a Maitland joint mobilization protocol and kinesiotherapy with free and resisted active exercises for 12 weeks, twice a week for 60 minutes, and received a booklet with information about SSc. The CG only received the information booklet. Both groups were evaluated before and after 12 weeks. In comparison with the CG, the GF showed a decrease of 11.33 points in the COCHIN, a difference considered clinically important, with a moderate effect size ($d = 0.7$; $p = 0.09$). There was a significant increase in range of motion by HAMIS ($d = 1.1$; $p = 0.01$), a significant reduction in pain by VAS ($d = 1.6$; $p = 0.001$) and an increase in the physical component of SF-12 ($d = 0.6$, $p = 0.04$). In the global perception of change, 72.7% of FG patients reported considerable

improvement. The adverse effects reported by the GF were; hand fatigue after exercise and pain that disappeared after the 6th and 7th week of intervention. It was concluded that the Maitland joint mobilization protocol and kinesiotherapy improved the functionality of the hands, reduced pain in the hands and wrists, increased range of motion and improved quality of life in patients with SSc.

EXAMINATION BOARD:

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