The Effect of Paraffin Wax and Exercise vs. Exercise Treatment on Keyboard User’s Hands Pain and Strength

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ABSTRACT

Background: Repetitive stress injuries due to prolonged recurrent movement of hands such as using a keyboard could cause inflammation, discomfort of the hand and finger joints, pain, weakness, and stiffness. Paraffin wax has been used to treat many musculoskeletal problems that affect hands and feet because of its good contact to irregular contoured areas. The purpose of this study was to compare the effectiveness of using paraffin wax and exercise, versus exercise alone in treating keyboard users who are at risk of developing hands repetitive stress injury. Method and procedure: thirty female subjects using keyboard for at least four hours a day complained of hands pain and discomfort were divided into two groups: Paraffin-Exercise Group (PEG) (n=15) treated with paraffin wax for 15 minutes prior to exercise, five days a week, for two weeks, and Exercise Group (EG) (n=15) treated with exercise regimen only. Hands and fingers strength and pain level were measured at baseline, and one and two weeks post treatment. Result: Visual Analog Scale (VAS) and fingers key-pinch showed significant pain reduction starting 1st week for PEG and 2nd week for EG. Hands grips were significantly improved for both groups after the 2nd week (p<0.05). Conclusion: paraffin wax combined with exercises has faster effect in reducing hand pain intensity than exercise alone, both treatment modalities has similar effect in improving hand and finger grip strength. Keywords: hand disorder, Paraffin wax, Thermotherapy, keyboard user, pain