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Original Article

Increased Range of Motion and Decreased Strength of the Thumb in Massage Practitioners with Thumb Pain

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Abstract: The purpose of this study was to compare the range of motion (ROM) and strength of the metacarpophalangeal (MP) and interphalangeal (IP) joints among massage practitioners with and without thumb pain and control subjects. Sixteen massage practitioners with thumb pain, 16 practitioners without thumb pain, and 16 control subjects participated in this study. ROM of flexion, extension, and abduction in the MP joint; ROM of flexion and extension in the IP joint of the thumb; strength of the flexor pollicis brevis (FPB), extensor pollicis brevis (EPB), abductor pollicis brevis, flexor pollicis longus (FPL), and extensor pollicis longus measured in all subjects. ROM of extension and abduction in the MP joint were significantly increased in massage practitioners with and without thumb pain compared with control subjects. ROM of extension in the IP joint was significantly increased in massage practitioners with thumb pain compared with those without thumb pain. The strength of the EPB and FPL muscle was significantly decreased in massage practitioners with thumb pain compared with those without thumb pain and control subjects, respectively. In addition, there was significantly increased EPB/FPB strength in massage practitioners without thumb pain compared to those with thumb pain and control subjects.

Key words: Massage practitioner, Musculoskeletal disorders, Range of motion, Strength, Work-related thumb pain

Introduction

Work-related musculoskeletal pain is widespread in many industrialized countries, and the cost related to chronic work-related pain is extremely high[1–4]. Repetitive stress on joints and tissues may cause musculoskeletal pain and loss of function, resulting in disability in several cases[2, 5]. Industry is growing, interest in beauty and cosmetics has increased, and the demand for massage practitioners has risen. The most common tasks performed by massage practitioners are body and face massage, reflexology, and aromatherapy. Because of the repetitive use of the thumb, thumb pain is the most common work-related musculoskeletal pain among massage practitioners, with an incidence of 50.3%[6]. Although some guidelines to prevent work-related musculoskeletal pain and decrease

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