

International Conference on

PHYSICAL EDUCATION, SPORTS MEDICINE AND DOPING STUDIES

August 08-09, 2018 Osaka, Japan

Assessment of effect of wearing electric muscular suit to improve muscle activity and muscle thickness in stroke patients

Seungchul Chon, Dasom Seo, Kyeong Bae and Kyenghun Jeong
Konyang University, South Korea

Electric Muscular Stimulation (EMS) suit is an electrical stimulus that minimizes discomfort and artificially activates muscles. However, to our knowledge, no study has provided exact measurement, such as obtained electromyography and ultrasound image the effects EMS suit for the stroke patients. The purpose of this study was to examine the efficacy of EMS suit as a treatment for strengthening on rectus femoris and abdominal muscle in squatting movement compared to wearing without EMS suit in stroke patients. 46 stroke patients were assigned by random sampling to an experimental group (n=23) to which squatting with wearing EMS was applied and a control group (n=23) to which squatting without wearing EMS was applied. Electromyography of the rectus femoris muscle and ultrasonography imaging of the rectus femoris muscle and abdominal muscle were immediately measured at pre- and post-test of intervention. There were significant interaction effect ($F=30.295$, $p=0.000$) for rectus femoris muscle at 100° knee flexion. There weren't significant interaction effect for abdominal thickness. There weren't significant interaction effect for rectus femoris thickness. These findings suggested that squatting movement with wearing EMS may improve strengthening on rectus femoris muscle compared to that without EMS in stroke patients.

keyjune@konyang.ac.kr