Case Report: A Comprehensive Rehabilitation Management of Operated Idiopathic Adolescent Scoliosis
Didik Febriyanto, Damayanti Tinduh

Efficacy of McConnell’s Medial Patellar Taping Application for Pain Management and Walking Velocity of Osteoarthritis Patients
Wahju Hidajati, Angela BM Tulaar, Yoga Iwanoff Kasimir, Surjanto MA

Effects of Inspiratory Muscle Training with Incentive Spirometry to Maximum Inspiratory Capacity and Quality of Life on Chronic Obstructive Pulmonary Disease Patients
Tresia Fransiska Ulianna Tambuan, Moerdjajati Angko, Anita Ratnawati, Zulkifii Amin

The Effect of Low Impact Aerobic Exercise on Functional Balance and Quality of Life in Type 2 Diabetes Mellitus Patients
Peni Hardjanti, Bayu Santoso, Nuniek Nugraheni, Agung Pranoto

Changes in Craniocervical Angle and Sagittal Shoulder Angle: Comparison between Modified Backpack and Conventional Backpack Users in 11-12 Aged Boys
Theresa D Arini Leman, Ferial H Idris, Nyoman Murdana
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Immediate Effect of Kinesio Taping on Knee Joint Proprioception after Anterior Cruciate Ligament Reconstruction</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Differing Effect of an EMG Biofeedback-Monitored Exercise Compared to an Un-monitored One in Vastus Medialis Obliquus and Vastus Lateralis Muscles Amplitude in Knee Osteoarthritis</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Comparison of Language Ability and Speech Production Between Constraint Induced Aphasia Therapy and Standard Speech Therapy for Chronic Broca Aphasic After Stroke</td>
<td>-</td>
</tr>
</tbody>
</table>
Differing Effect of an EMG Biofeedback-Monitored Exercise Compared to an Un-monitored One in Vastus Medialis Obliquus and Vastus Lateralis Muscles Amplitude in Knee Osteoarthritis

1. Umi Syayyirotin A --> Department of Physical Medicine and Rehabilitation, Faculty of Medicine Airlangga University - Dr. Soetomo Hospital, Surabaya - Indonesia
2. Lukitra Wardhani --> Department of Physical Medicine and Rehabilitation, Faculty of Medicine Airlangga University - Dr. Soetomo Hospital, Surabaya - Indonesia
3. Fatchur Rochman --> Department of Physical Medicine and Rehabilitation, Faculty of Medicine Airlangga University - Dr. Soetomo Hospital, Surabaya - Indonesia

Abstract

Objectives: The objective of the study of was to know the difference of maximum and ratio amplitudes of vastus medialis obliquus and vastus lateralis muscles before and after exercise with and without EMG biofeedback monitoring in knee osteoarthritis patients.

Methods: Randomized clinical study design. This study was conducted in Department of Physical Medicine and Rehabilitation Airlangga University, Dr. Soetomo hospital Surabaya. Twenty eight patients with knee osteoarthritis were randomly placed into 2 groups, the first group received progressive resistive exercise with EMG biofeedback, while the other group received training with progressive resistive method only. The ratio and maximum amplitudes of vastus medialis obliquus and vastus lateralis muscles were analyzed before and after 8 weeks exercise.

Results: The amplitudes of vastus medialis obliquus and vastus lateralis were improved significantly in group receiving progressive resistive training method with EMG biofeedback monitoring (p=.01 and p=.001, respectively). Comparison between two groups after 8 weeks of progressive resistive exercise showed significant improvements on amplitude of vastus medialis obliquus muscle (p=.014) and amplitude ratio of VMO/VL (p=.034) in EMG biofeedback monitoring group.

Conclusions: Progressive resistive exercise with EMG biofeedback monitoring could improve significantly the amplitudes of vastus medialis obliquus and vastus lateralis muscles and the amplitude ratio of VMO/VL in knee osteoarthritis patients.

Keyword : knee, osteoarthritis, progressive, resistive, exercise, EMG, biofeedback, monitoring, 

Daftar Pustaka :