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التوثيق الالكتروني والميكروفيلم

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DYNAMIC LUMBAR STABILIZATION PROGRAM VERSUS CONVENTIONAL REHABILITATION PROGRAM AFTER DISCECTOMY

A THESIS
SUBMITTED IN PARTIAL FULLFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER PHYSICAL THERAPY IN MUSCULOSKELETAL DISORDERS AND ITS SURGERY

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Dynamic lumbar stabilization program versus conventional rehabilitation program after discectomy, Sara Ahmed Amin Abd Elrahman*. Supervisors: Prof. Dr. Ahmed Hassan Hussien **, Prof. Dr. Nadia Abd El-Azim Fayaz**, Prof. Dr. Mohammed Omar Soliman ***, and Dr. Lilian Albert Zaky **. M.Sc thesis; Physical Therapy for Musculoskeletal Disorders and its surgeries, 2011.

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Abstract

The purpose of this study was to compare between the effect of dynamic lumbar stabilization program and the effect of a conventional rehabilitation program on the sagittal segmental lumbar motion and the functional disability in patients with lumbar discectomy .Thirty male patients with L4-L5 open discectomy participated in this study in two groups; group (A) and group (B) with mean age of 32.40 (± 5.70) years, mean weight of 67.93 (±8.31) Kg, mean height of 170.93 (± 6.36) cm , the patients were referred from the Neurosurgery and the Orthopedic surgery departments, at Kasr El ainy hospital, faculty of Medicine, Cairo University, they were assessed twice at the 4th week from the surgery (before starting the rehabilitation programs) and the 8th week from the surgery (after finishing the rehabilitation programs), group (A) received dynamic lumbar stabilization program for 12 sessions while group (B) received a conventional rehabilitation program for 12 sessions. Spinal Mouse device was used in this study to measure the sagittal segmental motion of the lumbar spine at level L4-L5 segment and Modified Oswestry Low Back Pain Disability Scale

(OSW) was also used in this study to measure the functional disability of these patients. The results of this study revealed that; at the 4th week from the surgery there was no significant difference in the sagittal segmental lumbar motion and the functional disability between group (A) and group (B), a significant difference in the sagittal segmental lumbar motion and the functional disability between before and after receiving dynamic lumbar stabilization program at group (A) , a significant difference in the sagittal segmental lumbar motion and the functional disability between before and after receiving the conventional rehabilitation program at group (B), at the 8th week from the surgery there was a significant difference in the sagittal segmental lumbar motion and the functional disability between group (A) and group (B). These results showed that the sagittal segmental lumbar motion at L4-L5 segment improved and the functional disability reduced after receiving dynamic lumbar stabilization program and after receiving the conventional rehabilitation program at the 8th week from the surgery, but the results after dynamic lumbar stabilization program were greater than after the conventional rehabilitation program.

Key Words: Discectomy, segmental lumbar motion, functional disability, Spinal Mouse, Modified Oswestry Scale.

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Sara Ahmed Amin Abd Elrahman
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List of Abbreviations

Abbreviations	Meaning
CT	Computed Tomography
EMG	Electromyography
MRI	Magnetic Resonance Imaging
3D	Three-Dimensional Analysis Device
ROM	Range Of Motion
LBP	Low Back Pain
LDH	Lumbar Disc Herniation
NSAIDS	Nonsteroidal Antiinflammatory Drugs
OSW	Oswestry Low Back Pain Disability Scale
Min	Minute
Sec	Second
Kg	Kilogram
M	Meter
mm	Millimeter
cm	Centimeter
Hz	Hertz
MHz	Megahertz
L3	Third Lumbar Vertebra
L4	Forth Lumbar Vertebra
L5	Fifth Lumbar Vertebra
C7	Seventh Cervical Vertebra
S2	Second Sacral Vertebra

S3	Third Sacral Vertebra
T1	First Thoracic Vertebra
T6	Sixth Thoracic Vertebra
T12	Twelfth Thoracic Vertebra
SD	Standard Deviation

List of Contents