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شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

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شبكة المعلومات الجامعية

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التوثيق الالكتروني والميكروفيلم

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شبكة المعلومات الجامعية

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التوثيق الإلكتروني والميكروفيلم

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بالرسالة صفحات لم ترد بالأصل

Cairo University
Faculty of Physical Therapy
Department of Biomechanics

Influence of Unilateral Knee Osteoarthritis on Some Radiological Parameters of the Lumbar Spine.

By

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THESIS

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2001

بسم الله الرحمن الرحيم

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صدق الله العظيم

سورة طه–الآية ١١٤

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Abstract

Influence of Unilateral Knee Osteoarthritis on Some Radiological Parameters of The Lumbar Spine / Hossam El-Dien Hassan Hassan El-Kholy;

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Abstract: Osteoarthritis (OA) is one of the most common diseases affecting the knee joint that is characterized clinically by pain, stiffness, tenderness at the joint margins, effusion, ligamentous laxity, impairment of motion, capsular contracture, muscle weakness, spasm, impairment of function and loss of independence. These clinical findings causes a symptomatic change in the functional performance of the patient that would result in change of the location of the line of gravity in relation to various body segments in static situations and abnormal oscillation of the center of gravity in dynamic activities. Thus, the purpose of this study is to determine the structural changes in the lumbar spine in patients with unilateral knee OA. Thirty healthy subjects (the control group) and thirty subjects with unilateral knee OA (the study group) were included in this study. X-ray images of the lumbar spine (A-p and Lateral) were obtained for each subject in the natural standing position. From the lateral X-ray films the radiological parameters concerning the lordotic curve angle (LCA) (measured as the angle between the tangential line of the superior end-plate of L1 and the tangential line of the superior sacral plateau), the lumbosacral angle (LSA) (measured as the angle between the tangential line of the inferior endplate of L5 and that of the superior sacral plateau and the sacral inclination angle (SIA) (measured between the tangential line of the superior sacral plateau and a horizontal line) were recorded for each subject. also, the radiological findings regarding osteophytes, disc degeneration and spondylolisthesis were recorded from both views. The independent t-test was used to compare the study group to the control group regarding the LCA, LSA and SIA. Also the incidence of osteophytes, disc degeneration and spondylolisthesis were calculated. The results of this study suggested that there is no significant difference ($p < 0.05$) between both groups regarding the LCA, LSA and SIA. While the

incidence of osteophytes, disc degeneration and spondylolisthesis were higher in the study group.

Key words; osteoarthritis-lordotic curve angle-lumbosacral angle-sacral inclination angle-knee joint-lumbar spine.

DEDICATION

To my parents that gave me every thing in my life

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