سامية محمد مصطفى

شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

سامية محمد مصطفى

شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

سامية محمد مصطفى

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

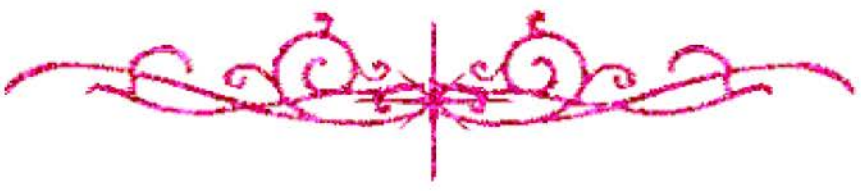
يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

سامية محمد مصطفى

شبكة المعلومات الجامعية

بعض الوثائق الأصلية تالفة



سامية محمد مصطفى

شبكة المعلومات الجامعية

بالرسالة صفحات لم ترد بالأصل

Age Changes of Human Vertebral Column, Anatomical and Radiological Study

A Thesis

Submitted in Partial Fulfilment of the Requirements for M.D Degree in Basic Medical Science (Anatomy)

By

Manal Mahmoud Sami Ahmed El-Meligy

Medical Master Degree

1993 (Assiut)

Supervised By

Prof. Dr.

Fathy Z. Hassan

Prof. of Anatomy

Faculty of Medicine,

Assiut University

Prof. Dr.

M. Gamal El-Din Abd El-Motaal

Prof. of Rheumatology & Rehabilitation

Faculty of Medicine,

Assiut University

Dr.

Abd El-Salam Abd El-Aziz

Lecturer of Radiology

Faculty of Medicine,

Assiut University

Assiut University

Assiut - Egypt

1997

Acknowledgment

ACKNOWLEDGMENT

I am glad to have this opportunity to express my deepest appreciation and sincere gratitude to ***Prof.Dr. Fathy Z. Hassan***, professor of anatomy, Faculty of Medicine, Assiut University for suggesting the point of research, supervising and continuous kind help through this work.

I am also very grateful and thankful to ***Prof.Dr. M. Gamal El-Din Abd El-Motaal***, professor of Rheumatology & Rehabilitation, Faculty of Medicine, Assiut University for supervising and valuable help during the achievement of this study.

I would also take the pleasure in thanking and expressing my deepest appreciation and sincere gratitude to ***Dr. Abd El-Salam Abd El-Aziz***, lecturer of radiology, Faculty of Medicine, Assiut University for his kind help, encouragement and hearty effect in this work.

I would like to express my thanks to ***Dr. Nadia Mohamed Ismael***, assistant professor of Rheumatology & Rehabilitation, Faculty of Medicine, Assiut University for advice and kind help.

Many thanks to all the staff members of the department of Anatomy and the department of Radiology, Faculty of Medicine, Assiut University and all my colleagues for their spiritual encouragement.

My deepest appreciations and gratitutude to all members of my family for their help and moral support.

Manal M.S.A. El-Meligy

Contents

Contents

Aim of work

AIM OF THE WORK

The Upper Egyptians (as a Third world population) are subjected to many social and economic stresses which can in turn be reflected on their life style throughout the course of their life. This can affect the normal anatomy of their vertebral column and its alteration with the normal aging process.

Age changes were reported to affect the human vertebral column, either in the biochemical, structural or functional aspects. Examination of patients sometimes reveals disagreement between the degree of their complaint and the structural alterations in their vertebral column also recorded radiologically.

Many young patients were represented with low back pain, per se or associated with sciatica or other lesions in the back. Vacuum phenomenon was observed during computerized tomography scanning (CT) and plain X-ray examination of the lumbar region in some patients. It was described radiologically as a dark shadow inside joints or bones. It is a collection of gas within the disc space, the vertebral body, the apophysial joint or the spinal canal.

That is why the present work is an attempt to find the nature of vacuum phenomenon and its relation to the aging process which is still a matter of debt, taking the lumbar region as an example, and using plain X-ray and computerized tomography scanning (CT) as method of investigation. So, bone density, alignment of vertebral column,

intervertebral disc space size, vertebral body shape, the appearance of the vertebral appendages, vertebral boundaries, facet joints or sacroiliac joints, the presence of osteophytes, vacuum phenomenon, spinal canal stenosis and any abnormal paravertebral soft tissue shadow are investigated. The collected data are analysed and correlated to age and the presence or absence of complaint.

Complete history is taken and complete clinical examination is performed, to exclude the possibility of trauma, diabetes, congenital anomalies including inborn error of metabolism, bone and joint disease, operation, corticosteroid therapy and urogenital tract disease, which were recorded to affect bone or cartilage, or to disturb the normal biomechanics, or to give rise to low back pain.

Consequently, this is a trial to display some of the structural changes in Upper Egyptian vertebral column (lumbar region) with different ages and to explain the functional alterations on these bases.