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شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم



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شبكة المعلومات الجامعية



شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



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جامعة عين شمس

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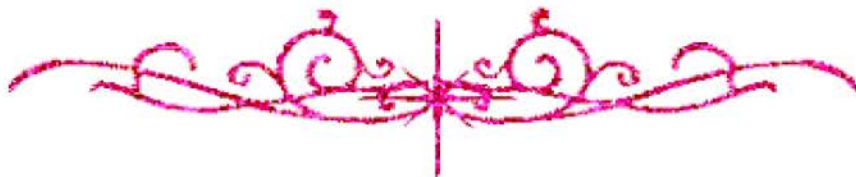
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Age Changes of Human Vertebral Column, Anatomical and Radiological Study

A Thesis

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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.