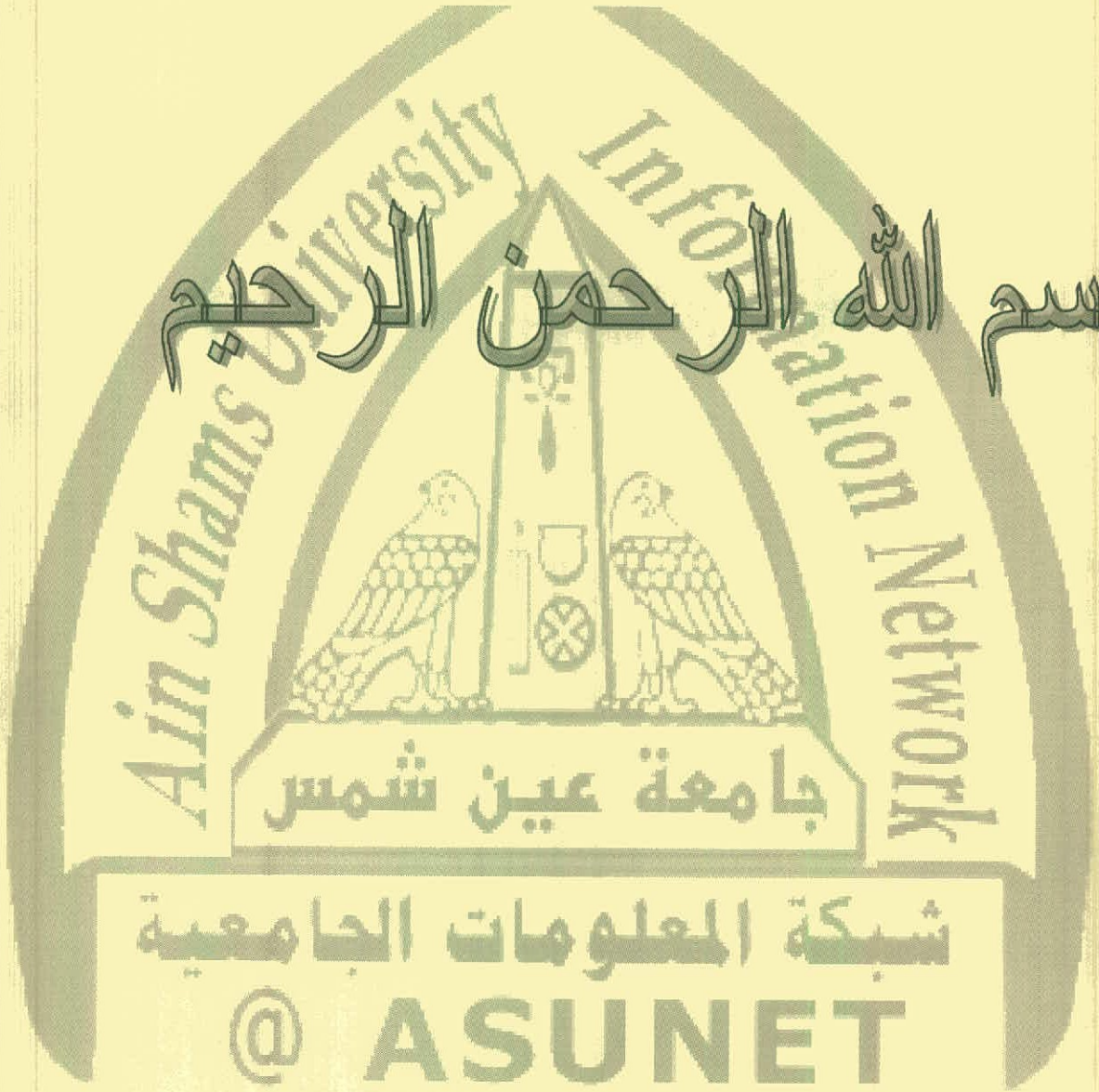
شبكة المعلومات الجامعية



بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

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

يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

بعض الوثائـــــــق الاصليـــــة تالفـــة

بالرسالة صفحات لم ترد بالاصل

OBJECTIVE ASSESSMENT OF TRUNK FUNCTION, DISABILITY & PSYCHOMETRY IN PATIENTS WITH LOW BACK PAIN

THESIS

Submitted in partial Fulfilment of The Requirements for the M.D. Degree in Rheumatology and Rehabilitation

By

Hani Ali Gaweesh

(M.B., B.Ch., M. Sc. Rheumatology & Rehabilitation)

Supervised By

PROF . DR.

Mohammed Reda Awad

Prof. of Rheumatology & Rehabilitation

Military Medical Academy

PROF . DR.

Samia Mohammed Abd El Monem

Prof. of Rheumatology & Rehabilitation

Benha Faculty of Medicine

PROF . DR.

Ehsan Mahmmod Fahmy

Prof. of Neuropsychiatry

Benha Faculty of Medicine

PROF . DR.

Gamal Abdel Ghafaar Hammad

Assis. Prof . of Rheumatology & Rehabilitation

Benha Faculty of Medicine

Benha Faculty of Medicine

2001

بسم الله الرحمن الرحيم

ACKNOWLEDGMENT

First of all , thanks to God for helping me to achieve this work .

I wish to express my deep gratitude to **Prof. Dr. Samia Abdel Monem,** professor of Rheumatology & Rehabilitation , Benha Faculty of Medicine for her continuous and great help with kind cooperation throughout this work . I am definitely indebted to her more than I can express .

I would like to express my endless thanks to **Prof. Dr. Reda Awad,** professor of Rheumatology & Rehabilitation , Military Medical Academy .

I would also like to express my thanks to **Prof. Dr. Ehsan Fahmy**, professor of Neuropsychiaty , Benha Faculty of Medicine .

Sincere thanks to **Prof. Dr. Gamal Hammad** , Assistant professor of Rheumatology & Rehabilitation , Benha Faculty of Medicine for his great help to me allover the time, and for his suggestion and planning this work .

Hani Gaweesh

CONTENTS

LIST OF ABBREVIATIONS

- BDI : Beck Depression Inventory
- CNS : Central nervous system
- CRP : C - reactive protein .
- CT : Computerized Tomography
- DSEP : Dermatomal Somatosensory evoked potential
- EMG : Electromyography
- E P : Evoked Potentials
- ESR : Erythrocyte Sedimentation Rate .
- FLP : Functional limitations profile .
- ISOM : Maximum Isometric torque .
- LBP : Low Back Pain .
- LBPD : Low back pain disability
- MMPI : Minnesota Multiphasic personality Inventory
- MRI : Magnetic Resonance Image
- OOC : Occupational Orthopedic center
- PSA : Prostate Specific Antigen
- ROM : Range of motion .

Introduction and Aim of the work

Introduction :

Low back pain is the most frequent musculoskeletal complaint at all ages in all strata of the population (**Handler , 1993**) . It is the most common cause of impairment of activity in persons less than forty five years old (**Anderson , 1981**) .

From the medical point of view , the most fundamental problem in dealing with back pain is determining its actual cause . With a thorough medical history , and physical examination of the individual, the physician can often categorize back pain as muscular or pathological (**Bigos & Battie , 1987**) .

Without establishing a specific anatomical etiology for back pain, determining the appropriate treatment becomes very difficult . The need to objectively define non specific back pain in a clinically relevant way is a major issue for a back evaluation system to address **(Wiesel et al. , 1980**) .

Psychological factor are dominant in the presentation of chronic low back pain in adults and the disorder is not primarily a musculoskeletal one (**Sikorski et al. 1996**) .

Objective measurement of lumbar function has been shown to be effective in evaluating and treating patients with non specific back pain. Such an approach contrasts with the traditional reliance on the patient's decreasing pain symptoms to indicate recovery . Objective measurement relies instead on quantitative data , even with persistent pain to demonstrate restoration of function **(Mayer , 1985) .**

Aim of the work :

The aim of this work is to study the intercorrelations between trunk function , disability and psychological aspect in patients with low back pain .

REVIEW OF LITERATURE

Anatomy of the lumbar Spine

Anatomy of the lumbar spine

Lumbar vertebrae

The Lumbar spine is composed of five vertebrae. Each vertebra consists of a body anteriorly and a neural arch posteriorly that encloses the vertebral canal. The spinal cord and cauda equina pass through and protected by the structures surrounding the vertebral canal.

The neural arch has two pedicles on its sides and lamina posteriorly. A spinous process projects posteriorly from the lamina in the midlne and is usually palpable through the skin. A transverse process projects laterally from each side at the junctin of the pedicle and lamina (**Louis, 1983)**, Fig. (1).

The Body :

The body of each vertebra has a dense bony cortex surrounding spongy medullary bone. The cortices of the inferior and superior aspects of the body are called the vertebral endplates. The endplate which is thicker in its center is covered by a cartilagenous plate. The periphery of the endplate is thickened to form a distinct rim that is derived from the periphery plate and become fused to the body at 15 years of age *(Borensteim et al., 1995)*.

The body of the vertebra is large and wide from side to side than forward and backwards. The ring of cortical bone at the periphery acts as an anchoring ring for the attachment of the