Imaging

OF LUMBAR DISC LESIONS

Thesis
Submitted for Partial Fullfilment
of
Master degree of Radiodiagnosis

Presented By:

Khaled Abou El-Jotouh Ahmed

M.B.Bch

52649

Under Supervision of:

Prof. Dr. Abd El-Zaher Hassan

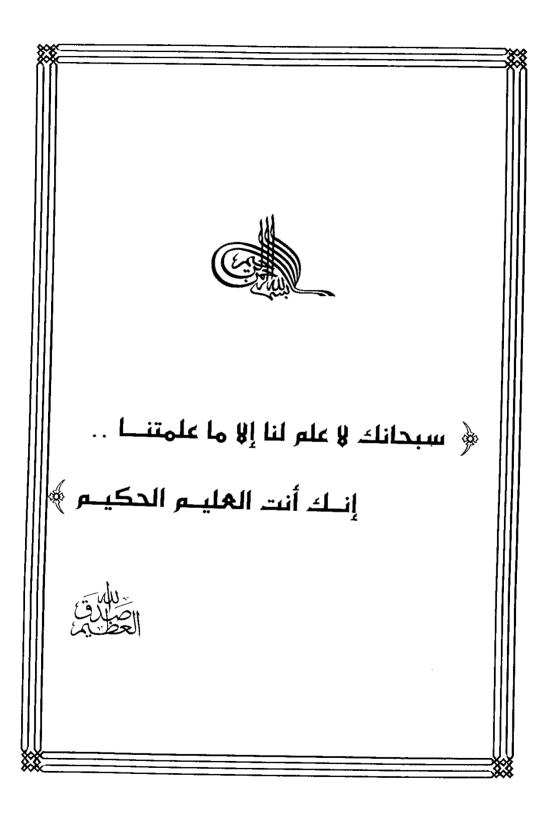
Professor of Radio-diagnosis
Faculty of Medicine
Ain Shams University

Faculty of Medicine Ain Shams University

1996

Merson Singan





ACKNOWLEDGMENT



Impressed with the fatherly encouragement of **Prof. Dr. Abd EL-ZAHER Hassan**, Professor of radio diagnosis, Ain Shams University. I wish to thank him all sincerely for his time, interest & commitment. I am also grateful to him for his insightful supervision & valuable comments which helped me most to complete this work in its present form

Many thanks to all staff members and residents in the department of Radiodiagnosis, Ain Shams University.

Finally, no words can express the warmth of my feelings to **my family** for their understanding & patience.



CONTENTS

Chapter 1: Introduction and Aim of the work	1
Chapter 2: Radiological Anatomy of Lumbar Spine And Intervertebral disc space	2
Chapter 3: Pathology of Lumbar Disc Lesions	38
Chapter 4: Methods of Radiological And Imaging Mode of Lumbar Spine.	alities 60
Chapter 5: Radiological And Imaging Manifestations of Lumbar Disc Lesions	76
Chapter 6 : Illustrated Cases .	123
Chapter 7 : Opinion.	132
Chapter 8 : Summary And Conclusions.	134
Chapter 9 : References.	136
: Arabic Summary.	

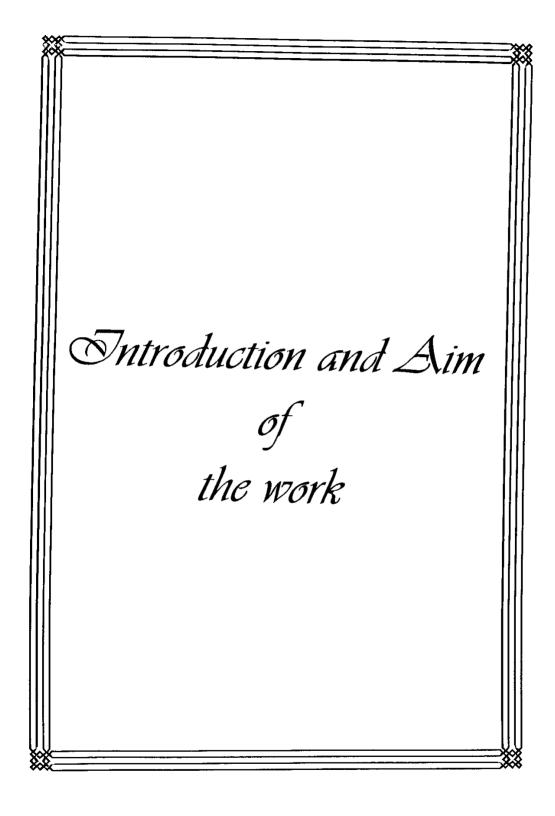




Abbreviations

CSF	Cerebrospinal fluid.
СТ	Computed tomography.
HUS	Hounsfield Unit.
IINI	Herniated nucleus pulposus.
IV	Intravenous.
MR	Magnetic Resonance.
SNR	Signal to noise ratio.
TE	The time to echo in the spin-echo sequnce.
TR	Repetition time.
WI	Weighted Image.





INTRODUCTION AND AIM OF THE WORK



Lumbar disc lesions represent a major and frequent clinical problem for both patient and health care system. It is an acronym for heterogeneous group of disorders whose hallmark is back pain, sciatica and functional impairment.

The diagnostic evaluation of patient presenting with lumbar disc lesion and decision making is a major challenge to both radiologists and surgeons.

Many imaging techniques are available for the investigation of diseases of lumbar disc such as, plain radiography, Myelography and computerized Tomography which are the most widely used in current neurological practice. Although Magnetic Resonance Imaging where available is often preferred when possible, information required for diagnosis and treatment should be obtained from non-invasive techniques before proceeding to invasive procedures such as, Myelography and post-Myelography computerized Tomography. The decision to resort to these invasive techniques should always be a matter of consultation between clinician and radiologist. The techniques employed must be tailored to the individual case.

The aim of the work is to differentiate between the ability of different modalities in diagnosing lumbar disc lesions in an attempt to be able to use the modality of choice for each individual case taking into consideration the clinical manifestations and economical level.

