

بسم الله الرحمن الرحيم



HOSSAM MAGHRABY



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



HOSSAM MAGHRABY

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

HOSSAM MAGHRABY



بعض الوثائق الأصلية تالفة



HOSSAM MAGHRABY



بالرسالة صفحات

لم ترد بالأصل



HOSSAM MAGHRABY

B1EVA

THE ROLE OF MAGNETIC RESONANCE IMAGING IN SHOULDER JOINT LESIONS

THESIS

Submitted in partial fulfillment of the requirement of MD degree

in
Radiodiagnosis

By

SAMEH AHMED KHODAIR

(M.B.B.Ch & M.S.c. Radiodiagnosis)

Supervisors

Prof. Dr.

MAHMOUD ABDEL AZEZ DAWOUD

Prof. & Head of Radiology and imaging Department

Faculty of Medicine

Tanta University

Dr.

Dr.

KHALED ESMAIL EL-SHAFFEY

Ass. Prof. of Radiodiagnosis

Faculty of Medicine

Tanta University

NAGLAA LOTFY DABEES

Lecturer of Radiodiagnosis

Faculty of Medicine

Tanta University

FACULTY OF MEDICINE

TANTA UNIVERSITY

2005



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

الْحَمْدُ لِلَّهِ الَّذِي هَدانا لهذا

والذي كنا في ضلالٍ مبينٍ

سورة البقرة (٢٢)

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
الْحَمْدُ لِلَّهِ الَّذِي هَدانا لهذا
والذي كنا في ضلالٍ مبينٍ

ACKNOWLEDGMENT

THANKS to ALLAH for helping me to complete this work

*I wish to express, my deepest and profound thanks to **Prof. Dr. Mahmoud Abdel Aziz Dawoud** Prof. And Head of Radiology and imaging department, Tanta University, for giving me the honor and great privilege of working under his kind supervision, for his continuous encouragement and fruitful gaudiness and intensive unlimited support.*

*I would like to express my endless appreciation to **Dr. Khaled Esmail El-Shafey** Ass. Prof. Radiodiagnosis, Tanta University, for his kind criticism and continuous support.*

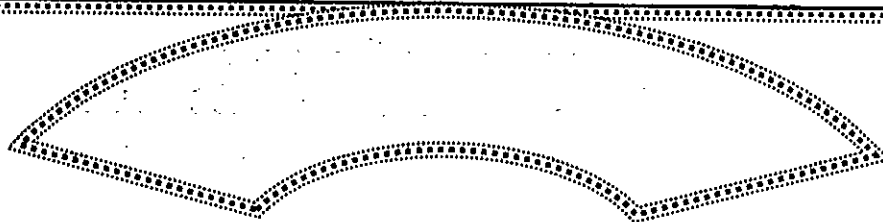
*I would like to express my most sincere and special thanks to **Dr. Naglaa Lotfy Dabes** Lecturer of Radiodiagnosis, Tanta University, for her endless cooperation and gaudiness.*

Also I wish to express my thanks to my colleagues in Radiology department, Tanta University for their help and cooperation during the months of this work.

Finally, deep appreciation is expressed to my family for their support and kind help. Special thanks for my father for his continuous support and encouragement throughout my life.

CONTENTS

	PAGE
INTRODUCTION.....	1
AIM OF THE WORK	3
REVIEW OF LITERATURE.....	4
- ANATOMY OF THE SHOULDER JOINT	4
- BIOMECHANICS OF THE SHOULDER JOINT.....	33
- MRI TECHNIQUES OF THE SHOULDER.....	39
- MR IMAGING OF SHOULDER JOINT LESIONS.....	50
PATIENTS AND METHODS	93
RESULTS.....	100
DISCUSSION.....	138
SUMMARY AND CONCLUSION.....	152
REFERENCES.....	156
ARABIC SUMMARY.....	



INTRODUCTION

I
N
T
R
O
D
U
C
T
I
O
N

INTRODUCTION

Shoulder pain is a common clinical complaint that may be caused by abnormalities of the rotator cuff and a variety of other pathologic conditions.⁽¹⁾ It is well documented that overhead activities place extremely high stresses on the static and dynamic restraints of the glenohumeral joint. This renders the overhead athlete vulnerable to a significant number of shoulder problems. The differential diagnosis is extensive and includes impingement syndrome, instability, tendinosis and rotator cuff pathology, labral lesions, biceps disorders, radiculopathy, and thoracic outlet syndrome. In older patients, arthritis may even be a factor.⁽²⁾

Numerous complexities unique to the shoulder make diagnosis challenging for both the primary care physician and the accomplished surgeon. The shoulder is anatomically complex with numerous structures contributing to both the mobility and stability of the joint. Variations of normal anatomy can lead to confusion during arthroscopic diagnosis and treatment.⁽³⁾ Rotator cuff tears are often hard to diagnose because of muscle atrophy that impairs the patient's ability to perform diagnostic maneuvers.⁽⁴⁾ An accurate diagnosis is the essential element of a successful treatment plan in patients who present with shoulder pain.⁽¹⁾

Diagnostic imaging is important when there is significant uncertainty regarding the cause of shoulder pain and the outcome may be improved by timely implementation of various treatment options.⁽¹⁾ Diagnostic imaging, especially MR imaging, clarifies some diagnostically difficult scenarios by demonstrating both intra-articular and extra-articular anatomy.⁽³⁾

Magnetic resonance imaging (MRI) may help to establish the cause of shoulder pain by accurately depicting the presence and extent of bone and soft tissue pathology about the shoulder. MR imaging provides clinically useful information in detecting and characterizing pathology of the rotator cuff and other shoulder disorders in a noninvasive fashion.⁽¹⁾ MR imaging has the advantages of inherent improved soft-tissue contrast, multiplanar imaging capability, and excellent resolution. It allows the visualization of soft-tissue structures, giving unparalleled contrast with inherent pathologic information without the use of ionizing radiation.⁽³⁾

Magnetic resonance imaging has been shown to be an accurate method for accurately evaluating the glenoid labrum. However, using either conventional or arthrographic MRI of the superior labrum has been fraught with error. Continuing advances in surface coil design, computer software, and image processing have resulted in the rapid acquisition of superior quality MR images of the shoulder, yielding increased diagnostic accuracy.⁽⁵⁾

**AIM OF
THE WORK**

**AIM
OF
THE
WORK**

AIM OF THE WORK

The aim of this work is to evaluate the role of magnetic resonance imaging in diagnosis of shoulder joint lesions.

**REVIEW OF
LITERATURE**

**R
E
V
I
E
W

O
F

L
I
T
E
R
A
T
U
R
E**