شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

شبكة المعلومـــات 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 اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

The Role of MR1 in Diagnosis of Pituitary Tumours

Thesis
Submitted for Partial Fulfillment of
M.D. Degree
In
Radiodiagnosis

By
Alaa Eldeen Mohamed Khalifa
Radiodiagnosis Department
Maadi Armed Forces Hospital
M.B., B.Ch. - M.Sc.

Supervisors
Prof. Dr. Salwa Taha Ahmed Ismail
Professor of Radiodiagnosis
Faculty of Medicine
Ain Shams University

General Dr. Sarwat Mohammed Selim
Consultant of Radiodiagnosis &
Head of Radiodiagnosis Department,
Maadi Armed Forces Hospital, Cairo

Faculty of Medicine - Ain Shams University
1997

Acknowledgment

I am most grateful and greatly indebted and gratitude to ***Professor Dr. Salwa Taha Ahmed Ismail,*** Professor of Radiodiagnosis, Faculty of Medicine, Ain Shams University, for her help, meticulous revision, kind encouragement and supervision, and the time she devoted for this work to come into the final form.

I am greatly indebted to ***General Dr. Sarwat Mohammed Selim,*** Consultant of Radiodiagnosis and Head of Radiodiagnosis Department, Maadi Armed Forces Hospital, Cairo, for his assistance, moral support and supervision.

I would like to express my thanks to Professor ***Dr. Zeinab Abdallah,*** Professor and Head of Radiodiagnosis Department. Faculty of Medicine, Ain Shams University, for her support and encouragement

It is as well, with great pleasure to record my sincere gratitude to ***Dr. Hassan Abd El-Moneim,*** Lecturer of Radiodiagnosis.

Last but not least, I am deeply grateful to my wife, who without her kind and her great effort of editing this work, it could not have come to light.


To My Mother
and Late Father

Contents

List of Abbreviation

ACTH	Adrenocarticotrophic hormone.
ADH	Aldosteron hormone (vasopressin hormone).
CS	Cavernous sinus
CSF	Cerebrospinal fluid
CT	Computerized tomography
FSH	Follicle stimulating hormone.
Gd DTPA	Gadolinium diethylene-triamin penta acetic acid.
GRE	Gradient echo images
I.V.	Intra venous
ICSH	Interstitial cell stimulating hormone
LH	Leutinizing hormone.
LTH	Lactogenic hormone.
MRA	Magnetic resonance angiography.
MRI	Magnetic resonance imaging
MSH	Melanocystic stimulating hormone.
SE	Spin echo images
STH	Somatotrophic hormone.
T1	Longitudinal relaxation time.
T2	Transversal relaxation time.
TE	Time to echo
TOF	Time of flight
TR	Time to repeat
TSH	Thyrotrophic hormone

List of Figures

7	The posterior part of pituitary gland and cavernous sinus in (a) anatomical and (b) coronal T1 weighted images. The vertical part of the internal carotid artery (A) has negligible signal, Optic chiasm (OC), infundibulum and third cranial nerves (III).	18
8	Sagittal (A) and coronal (B) MR images show bright post pituitary (arrow-head) and the isointense anterior pituitary)	23
9	Coronal T1 weighted images at the level of posterior pituitary, high signal intensity in post lobe. Posterior clinoid process (straight arrows), clivus (curved arrow)	23
10	A sagittal T1 weighted images showing the pituitary gland (P) has a homogenous signal intensity, negligible signal of sphenoid sinus (S) and the high-intensity signal from fatty marrow in dorsum sellae (D and clivus (curved arrow), optic chiasma (OC), infundibiulum (I)	24
11	The pituitary gland (P) has a normal size and homogenous signal intensity, above the gland is the optic chiasm (OC), cranial nerves (VI, VII), internal carotid artery (A)	27
12	Upper part of cavernous sinus in (A) axial anatomical and (B) T1 weighted images. The horizontal part of the cavernous internal carotid artery (A) is demonstrated. the lateral wall of the cavernous sinus and adjacent CSF can not be differentiated in this images because both have negligible signal (curved arrow), P, pituitary gland, (III) is third cranial nerves	28

Abstract

The aim of this work is to emphasize the role of MR1 in diagnosis of pituitary tumors.

This work was performed on 87 patient classified into 5 groups according to MR1 manifestation.

Adenomas, craniopharyngiomas dermoid, epidermoid and empty sella syndrome.

According to the MR1 criteria both T1 and T2 pulse sequence, the group I of adenomas are subdivided into 3 subtypes, water, solid and haemorrhagic types. it was concluded that MR1 has become the preferred modality for imaging the pituitary tumors.

Introduction and Aim of the Work