Role of Magnetic Resonance Imaging in evaluation of Ovarian Tumors

Thesis

Submitted For Partial Fulfillment of Master Degree in Radiology

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2015

دور الرنيـــن المغناطيســـى فى تقييـــم سرطـان المبيـــض

رسالة

توطئة للحصول على درجة الماجستير في

الأشعة التشخيصية

مقدمه من

الطبيبه/ مـــروى قيـــس احمـــد

بكالوريوس الطب والجراحة

تحت إشراف

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كلية الطـــب

جامعه عين شمس

٢٠١٥

سورة البقرة الآية: ٣٢

Acknowledgment

- First of all I would like to thank **ALLAH** for giving me the power to complete this work, may he be generous on me and give me the knowledge to help others.
- I am horned to express my deepest appreciation and profound gratitude to **Prof. Dr. Sherine Kadry Amin** Prof. of Radiodiagnosis, Faculty of Medicine, Ain Shams University, who has given me the privilege to work under her supervision. Her planning, constant guidance and generous cooperation have made the accomplishment of this work.
- My especial thanks to, **Dr. Ahmed Mohammed Bassiouny** Lecturer of Diagnostic Radiology, Faculty of Medicine, Ain Sham University, for his kind support. Also special thanks for all MRI unit operators.

Marwa Qays Ahmed

To My

Mother & Father & Sister /Mariam

For their warm affection, patience, encouragement, and for always being there when I needed them

To

My husband Dr. Ghaith Sael who always support me, my daughters Reem & Ann who fill my life with joy

Contents

List of Abbreviations

ADC	**:**	Apparent Diffusion Coefficient
BOT	**:**	Border line Ovarian Tumors
Cho	**:**	Choline
Cr	**:**	Creatine
CT	**:**	Computed tomography
DCE-MRI	**:**	Dynamic contrast Enhanced
DW	**:**	Diffusion-weighted
DWI	**:**	DIFFUSION weighted imaging
EADC	**:**	Exponential Apparent Diffusion Coefficient
FIGO	**:**	Fedetration International Gynaclolgy, Obestetric
FIGO	**:**	The International Federation of Obstetrics and Gynecology
FLASH	**:**	Fast low angle shot
FN	**:**	False Negative
FOV	**:**	Field of view
FOV	**:**	Field of view
FP	**:**	False positive
FSE	**:**	Fast SPIN ECHO
FSE	**:**	Fast Spin Echo
GCT	**:**	Granulosa cell tumors
Gd	**:**	Gadolinium
HASTE	**:**	Half-Fourier single shot turbo spin echo
HCG	**:**	Human chorionic gonadotrophin
MR	**:**	Magnetic Resonance
MRE	**:**	Maximum Relative Enhancement
MRI	**:**	Magnetic Resonance Imaging

MRS	**:**	MR spectroscopy
NAA	**:**	N-acetylaspartate
NPV	**:**	Nigative Predictive Value
PET	**:**	Positron Emission Tomography
ppm	**:**	Parts per million
PPV	**:**	Positive predictive value
PRESS	**:**	Point-resolved spectroscopy in the steady state
ROI	**:**	Region of interest
Rt	**:**	Right
SE	**:**	Spin echo
SE	**:**	Spin Echo
SI	**:**	Signal intensity
SNR	**:**	Signal-to-noise ratio
SPGR	**:**	Spoiled gradient-echo
STEAM	**:**	Stimulated echo acquisition mode
STIR	**:**	Short T1 inversion recovery
T1WI	**:**	T1 weighted images.
T2WI	**:**	T2 weighted images
TE	**:**	Echo TIME
TI	**:**	Inversion time
TN	**:**	True Negative
TNM	**:**	Tumor, nodal and metastatic staging
TP	**:**	True positive
TR	**:**	Repititon Time
TR	**:**	Repetition time
TV U/S	**:**	Trans vaginal u/s
US	**:**	Ultrasound
USPIO	**:**	Ultrasmall superparamagnetic iron oxide
WHO	**:**	World Health Organization

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Abstract

The purpose of this study is to demonstrate the value of magnetic resonance imaging for the diagnosis of ovarian tumors, and to discuss the accuracy of MRI in this setting.

This study was performed on 20 female patients and conducted in the Ain Shams hospital patients. All cases were referred from the gynecology department to the radiology department as ovarian masses based on U/S study for pelvic MR. The twenty (20 cases) were pathologically proved.

In our study the sensitivity of MRI was 90.0%, the specificity was 80.0%, and the accuracy was 85.0% for ovarian mass characterization.

In conclusion MRI, is highly accurate for identifying the origin of a mass and characterizing its tissue content, obviating surgery. Better results are achieved by combining DWI with the conventional MRI.

Key words: MRI, ovarian masses, pathological diagnosis.