Endovaginal Ultrasound and Doppler Evaluation after First Trimester Abortion

THESIS
Submitted for fulfillment of Master degree

In
Obstetrics and Gynecology

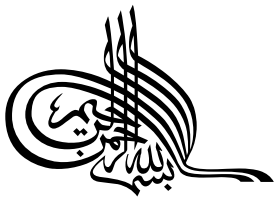
Presented by
Doaa Shafie Belal
M.B.B.Ch.
Resident of Obstetrics and Gynecology
Faculty of Medicine
Cairo University

Supervised by

Dr. Mohamed Hany Shehata
Professor of Obstetrics and Gynecology
Faculty of Medicine
Cairo University

Dr. Ahmed Soliman Nasr
Assistant Professor of Obstetrics and Gynecology
Faculty of Medicine
Cairo University

Faculty of Medicine
Cairo University
2009



وَقُلْ رَبِّ زِدْنِي عِلْماً

﴿سورة طـه الآية ١١٤﴾

Acknowledgement

*I would like to start with thanking **ALLAH** for granting me the ability to complete this work.*

*I would like to express my gratefulness to Professor **Dr. Mohamed Hany Shehata**, Professor of Obstetrics and Gynecology, Faculty of Medicine, Cairo University, for his supervision, advice, support, and guidance throughout this work.*

*I would also like to express my deepest thanks to **Dr. Ahmed Soliman Nasr**, Assistant Professor of Obstetrics and Gynecology, Faculty of Medicine, Cairo University. He spent generously his time in close supervision, encouragement, constructive criticism and great help in revising this thesis.*

*I am deeply indebted to department 21 team; **Dr. Eman El-Kattan** and **Dr. Hassan Gaafar**, Lecturers of Obstetrics and Gynecology, Faculty of Medicine, Cairo University, for their great coordination, help, guidance and care. Their effort and encouragement are indeed beyond the capability of words.*

Abstract

Early pregnancy loss is the commonest complication of pregnancy, and represents a major clinical workload for the gynecologist. It is estimated that around 40% of early pregnancies result in miscarriage.

Elective termination of pregnancy is widely performed throughout much of the world. Despite its safety, yet, the general rate of complications for surgical evacuation ranges from 1.4% to 8.4%, of which the incidence of retained products of conception (RPOC) constitutes 1-3%, which is relatively high.

Therefore, if a non-invasive procedure such as ultrasound can reduce the number of patients having a repeated D&C, then the overall number of complications can be reduced.

With the evolution of trasnsvaginal sonography (TVUS), a dramatic increase in the information obtained regarding uterine abnormalities and intrauterine contents has occurred.

This study aims at establishing the role of TVUS together with Doppler in the evaluation after elective termination of first trimester pregnancy.

Key-words: *termination of first trimester pregnancy, RPOC, TVUS, Doppler.*

CONTENTS

References

List of Tables

List of Abbreviations

ACA	Anticardiolipin antibodies
AP	Anteroposterior
APL (aPL)	Antiphospholipid antibodies
Bpm	Beat per minute
CDI	Color Doppler imaging
CHMs	Complete hydatidiform moles
Cps	Cycles per second
CRL	Crown-rump length
CW	Continuous wave Doppler
D&C	Dilatation and curettage
D&E	Dilatation and evacuation
DES	Diethyl stillbesterol
DT	Doubling time
EDRF	Endothelium derived relaxing factor
FSH	Follicle stimulating hormone
FVWs	Flow velocity waveforms
GA	Gestational age
HCG (hCG)	Human chorionic gonadotrophin
HIV	Human immuno-deficiency virus
HLA	Histocompatibility locus antigen
HM	Hydatidiform mole
Hz	Hertz
IFN	Interferon
IL	Interleukin
IS	International standard

IUP	Intra-uterine pregnancy
LAC	Lupus anticoagulant
LH	Luteinizing hormone
LMP	Last menstrual period
MSD	Mean sac diameter
MTHFR	Methylene tetrahydrofolate reductase
PCO	Polycystic ovaries
PGI2	Prostacyclin
PI	Pulsatility index
PHMs	Partial hydatidiform moles
PRF	Pulse repetition frequency
P-value	Probability value
PW	Pulsed wave Doppler
RI	Resistance index
ROC analysis	Receiver operator characteristic analysis
RPOC	Retained products of conception
SD	Standard deviation
S/D ratio	Systolic/diastolic ratio
SGA	Small for gestational age
TH 1	T-helper 1
TH 2	T-helper 2
TNF	Tumor necrosis factor
TOP	Termination of pregnancy
TSH	Thyroid stimulating hormone
TVS	Transvaginal sonography
TVUS	Transvaginal ultrasonography
US	Ultrasonography
VEGF	Vascular endothelial growth factor

WHO	World Health Organization

List of Figures