# MEDICAL VERSUS SURGICAL TREATMENT OF INCOMPLETE FIRST TRIMESTERIC ABORTION: A PROSPECTIVE RANDOMIZED CASE CONTROL STUDY

**Thesis** 

Submitted for Fulfillment Of Master Degree In Obstetrics and Gynaecology

By

#### **Mohamed Sobhy Ramadan**

(M.B.B.Ch. 2004)- Cairo University

Supervised by

#### Prof. Dr. Ahmed Lotfy Aboul Nasr

Professor of Obstetrics and Gyanecology,

Head of Obstetrics and Gynaecology Department

Faculty Of Medicine- Cairo University

#### Prof. Dr. Sherif Mohamed Maher Negm

Professor of obstetrics and gynaecology,

Cairo University

#### **Dr. Ahmed Mohamed Maged**

Assistant professor of obstetrics and gynaecology

Cairo University

Faculty Of Medicine
Cairo University
2015





Thanks to ALLAH who helped me to accomplish this work

My deepest and warmest gratitude to my great supervisor **Prof. Dr. Ahmed Lotfy AboulNasr**, Professor of obstetrics and gynaecology, head of obstetrics and gynaecology department, Faculty of Medicine, Cairo University, who in addition to his valuable guidance and supervision, has provided me with a great deal of support, encouragement and Knowledge.

I would like to express my great appreciation and thanks to **Prof. Dr. Sherif Mohamed Maher Negm**, Professor of obstetrics and gynaecology, Faculty of Medicine, Cairo University. It was an honor to me to carry out this work under his continuous guidance, encouragement and expert supervision.

The present work could not have been done without the help of **Doctor Ahmed Mohamed Maged**, assistant professor of obstetrics and gynaecology, Faculty of Medicine, Cairo University, for his guidance and continuous support.

## **Contents**

	Page
List of Tables	I
List of Figures	II
List of Abbreviations	III
Introduction	1
Aim of the Work	3
Review of Literature	
Chapter (1) Abortion	4
Chapter (2) Sonoanatomy Of Female Pelvic Organs	20
Chapter (3): Management Options	29
Chapter (4): Misoprostol	46
Patients and Methods	61
Results	68
Discussion	78
Conclusion	85
Recommendation	86
Summary	87
References	90
Arabic Summary	١

#### **ABSTRACT**

The aim of this study is to assess efficacy of medical treatment of incomplete abortion with misoprostol versus surgical procedures.

This study is a prospective randomized controlled trial, which was conducted at Kasr Alaini hospital. The study included sixty patients suffering from first trimesteric incomplete abortion. The patients were randomly divided into two groups, group 1 (misoprostol group); (cases) which included thirty patients and they were medically treated as outpatient, 600µg misoprostol (misotac ®, SIGMA) was prescribed as single oral dose and group 2 (control group) which included thirty patients and they underwent D&C, all patients were followed up after 1 week with a transvaginal ultrasonography.

#### Key words:

Incomplete abortion, misoprostol, surgical evacuation.

## List of Tables

	Table	Page
1-1	Ultrasound features in early pregnancy	27
2-1	Descriptive data of the studied groups	68
2-2	Vital data of the studied groups	70
2-3	Medical problems among the studied groups	72
2-4	Severity of vaginal bleeding among the studied groups	73
2-5	Abdominal pain among the studied groups	74
2-6	Comparison between the studied groups as regards endometrial thickness before treatment	75
2-7	Comparison between the studied groups as regards endometrial thickness after treatment	76
2-8	Comparison between the studied groups as regards result of treatment	77

## <u>List Of</u> Figures

	Figure	Page
1-1	Placental development in normal early pregnancy and in early pregnancy loss.	15
1-2	7. 0	20
1-2	Normal uterus, sagittal scan of normal antiverted uterus	20
1-3	Transvaginal ultrasonography of normal ovary with	23
	multiple follicles	
1-4	An empty gestational sac	26
1-5	Ultrasound picture of silent abortion	26
1-6	Mean plasma concentrations of misoprostol over time	47
1-7	Mean serum levels of misoprostol in pg/mL for four	49
	epithelial routes of misoprostol administration over 5	
	hours.	
2-1	Mean age among the studied groups	68
2-2	Mean of gestational age among studied groups	69
2-3	Mean parity among the studied groups	69
2-4	Mean blood pressure among the studied groups	70
2-5	Mean pulse among the studied groups	71
2-6	Medical problems among the studied groups	72
2-7	Vaginal bleeding among the studied groups	73
2-8	Abdominal pain among the studied groups	74
2-9	Endometrial thickness before treatment	75
2-10	Endometrial thickness after treatment	76
2-11	Results of treatment among both groups	77

### <u>List Of Albreviations</u>

μg	MICRO-GRAM
ACOG	AMERICAN COLLEGE OF OBSTETRICS AND
	GYNAECOLOGY
AUC	AREA UNDER THE CURVE
ВМІ	BODY MASS INDEX
CI	CONFIDENCE INTERVAL
D&E	DILATATION AND EVACUATION
EVA	ELECTRIC VACUUM ASPIRATION
FDA	FOOD AND DRUG ADMINISTRATION
HCG	HUMAN CHORIONIC GONADOTROPIN
IU	INTERNATIONAL UNIT
IUD	INTRAUTERINE DEVICE
IV	INTRAVENOUS
L	LITER
MVA	MANUAL VACUUM ASPIRATION
Ng	NANO-GRAM
NSAIDs	NONSTEROIDAL ANTI-INFLAMMATORY DRGUGS
RCOG	ROYAL COLLEGE OF OBSTETRICS AND
	GYNAECOLOGY
RH	RHESUS FACTOR
RR	RELATIVE RISK
TVS	TRANSVAGINAL ULTRASONOGRAPHY
β-hCG	BETA SUBUNIT OF HUMAN CHORIONIC GONADOTROPIN

#### **INTRODUCTION**

Abortion is the most common complication of early pregnancy, and remains an important clinical problem. Approximately 20% of women attending early pregnancy units suffer a abortion. Most women will present with history of vaginal bleeding, abdominal pain or both which are traditionally associated with abortion. However significant proportion of women will be asymptomatic. Knowledge of the pathophysiology of this condition is limited and therefore therapeutic regimens are based on few data (Simpson and Jauniaux, 2007).

The overall early pregnancy loss rate is thought to be nearly 50%. At least 15% of fertilized ova are lost before implantation (Little, 2008) and 20–25% of pregnancies end before they can be clinically detected (Wilcox et al., 2008), leading to an incidence of spontaneous abortion of some 12–19% among clinically recognized pregnancies (Giacomucci et al., 2008).

The management of abortion has changed little and conventional surgical evacuation of the uterus has been recommended when there are retained products of conception. However, the technique carries a small but a real risk of morbidity and mortality (MacKenzie and Bibby, 2008).

The drug, misoprostol, has been used to reduce the risk of stomach ulcers that occur in people who take certain pain relievers. Misoprostol is now more commonly used to stimulate contractions

1