بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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MONA MAGHRABY

Hysteroscopic Evaluation of Uterine Cavity after Uterine Conservation for Morbidly Adherent Placenta; Controlled Clinical Trial

Thesis

Submitted for Partial Fulfillment of the Master Degree
in **Obstetrics and Gynecology**

By

Captain Dr. Mohamed Ali Mohamed Shehab
M.B.B.CH, Menoufia University
Resident of Obstetrics and Gynecology,
Misr El-Gedida Military Hospital

Under Supervision of

Prof. Mohamed Ibrahim Mohamed Amer
Professor of Obstetrics & Gynecology
Faculty of Medicine, Ain Shams University

Dr. Walid ELBasuony Mohamed Khalil
Assistant Professor of Obstetrics & Gynecology
Faculty of Medicine - Ain Shams University

Dr. Mohamed Saeed Khallaf
Lecturer of Obstetrics & Gynecology
Faculty of Medicine - Ain Shams University

Faculty of Medicine - Ain Shams University
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Mohamed Ali Mohamed Shehab

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List of Abbreviations

Abb.	Full term
ACOG	*American College of Obstetricians and Gynecologists*
ASRM	*American Society for Reproductive Medicine*
AUB	*Abnormal uterine bleeding*
CD	*Cesearen delivery*
CDI	*Color Doppler imaging*
CS	*Cesarean section*
CSD	*Cesarean scar defect*
D&C	*Dilation and curettage*
EW-AIP	*European Working Group on Abnormally Invasive Placenta*
HSG	*Hysterosalpingography*
IUAs	*Intrauterine adhesions*
MAP	*Morbidly adherent placenta*
MRI	*Magnetic resonance imaging*
RCOG	*Royal College for Obstetricians and Gynaecologists*
SHG	*Sonohysterography*
SIS	*Saline infusion sonohysterography*
TV US	*2D-transvaginal ultrasound*
US	*Ultrasound*
β-hCG	*Beta human chorionic gonadotropin*

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PROTOCOL OF A THESIS FOR PARTIAL FULFILMENT OF MASTER DEGREE IN OBSTETRICS & GYNECOLOGY

Title of the Protocol: Hystroscopic evaluation of uterine cavity after uterine conservation for morbidly adherent placenta; controlled clinical trial.

Postgraduate Student: Mohamed Ali Mohamed Shehab
M.B.B.CH., Resident of Obstetrics and Gynecology, Misr El-Gedida Military Hospital

DIRECTOR: Prof. Mohamed Ibrahim Mohamed Amer
Academic Position: Professor
Department: Obstetrics & Gynecology, Faculty of Medicine, Ain Shams University

25/12/18

Co-DIRECTOR: Dr. Waleed Al-Bassiouni Mohamed Khalil
Academic Position: Assistant Professor
Department: Obstetrics & Gynecology, Faculty of Medicine, Ain Shams University

Co-DIRECTOR: Dr. Mohamed Saeed Khallaf
Academic Position: Lecturer
Department: Obstetrics & Gynecology, Faculty of Medicine, Ain Shams University

Faculty of Medicine
Ain Shams University
2018

What is already known on this subject? AND
What does this study add?

The maternal morbidity in women with morbidly adherent placenta (MAP) is high. Trial of uterine conservation may reduce morbidity and preserve patient fertility.

This study aims assessment of uterine cavity and the endometrium after uterine conservation for morbidly adherent placenta.

1. INTRODUCTION

Morbidly adherent placenta has become one of the most challenging obstetric surgeries which associated with major maternal morbidity and mortality ***(Lockhart et al., 2010).***

Morbidly adherent placenta is defined as the abnormal attachment of the placenta to underlying myometrium and the chorionic villi attach to the myometrium due to a defect of the decidua basalis ***(Hibbard, 2005).***

The incidence of MAP has increased from approximately 0.8 per 1000 deliveries in the 1980s to 3 per 1000 deliveries in the past decade ***(Eller et al., 2009),*** the incidence of MAP is increasing in developed countries due any procedure or factor that produces uterine scar as repeated caesarean delivery, grandmultipara, previous curettage, placenta previa, submucous myoma. ***(Fitzpatrick, et al., 2012).***

It is important to make prenatal diagnosis to prepare the multidisciplinary care team and the operation requirement as (blood units, fresh plasma, ICU) ***(Warshak et al., 2010).***

Prenatal diagnosis of MAP is based on ultrasound (US). The most accurate is transvaginal ultrasound and colour Doppler imaging ***(Bowman et al., 2014),*** Magnetic resonance imaging (MRI) is particularly valuable for detecting parametrial invasion, posterior placenta and suspicion of percreta, ***(Palacios-Jaraquemada, 2013).***

Lines of management, one-step conservative surgery, it consist of resecting the accreta area followed by immediate uterine reconstruction ***(Palacios-Jaraquemada, 2012),*** or the classical approach most often recommended in cases of MAP is planned Cesarean hysterectomy prevents serious bleeding complications but definitely compromise the patient fertility ***(Teixidor-Viñas et al., 2015),*** or a conservative option which consists of

leaving margin of the whole placenta in place without attempt to remove then to perform uterine arteries embolization for uterine devascularization in order to get a progressive necrosis of the placenta ***(Fox, 2015)*** or excision of placenta with 1-cm health myometrium around the accretaarea and reconstruction of the uterine wall ***(Arulkumaran et al., 2012).***

After three months make hysteroscopic assessment postoperative of MAP to make evaluation of uterine cavity, hysteroscope is considered the "gold standard" for diagnosing intra uterine pathology ***(Birinyi et al., 2004)***, hysteroscope is the best methods to diagnose intrauterine adhesions, by using outpatient hysteroscopy which is placed into the cervical canal using saline to distend the endometrial cavity. Under direct visualization, the hysteroscope is advanced and the full cavity can be assessed and also can assess the ostia (the opening of the fallopian tubes into the uterus) ***(Gibbons et al., 2000).***

Intrauterine adhesion can classified into: 1-Mild adhesions: Filmy adhesions composed of basal endometrium, producing partial or complete uterine cavity occlusion, 2-Moderate adhesions: Fibromuscular adhesions that are characteristically thick; still covered with endometrium that may bleed upon division; partially or totally occluding the uterine cavity, 3-Severe adhesions: Composed of connective tissue; lacking any endometrial lining and likely to bleed upon division; partially or totally occluding the uterine cavity ***(AAGL, 2017).***

2. AIM/ OBJECTIVES

To evaluate uterine cavity by using hysteroscope after uterine conservation as a conservative procedures for MAP.

Research question:

In women complaining of morbidly adherent placenta which had conservative surgery (cervical reconstruction) does that procedure affect the uterine cavity and enodmetrium in comparison to uterine devascularization.

Research hypothesis: (Null hypothesis)

No effect between two techniques on uterine cavity and endometrium.

3. METHODOLOGY:
Patients and Methods

Study Design: prospective, controlled clinical trial.

Study setting: the study will be conducted in Ain Shams Maternity hospital.

Sample size justification:

All cases of morbidly adherent placenta that come to Ain Shams University hospital over a time period of 6 months and undergo conservative surgery (uterine conservation) will be examined and evaluated after 3 months by hysteroscope as a part of the study.

Study population:

Women will be recruited from women who had uterine conservation for morbidly adherent placenta by two ways either 1- cervical reconstruction or 2-devascularization procedures (uterine artery or internal iliac artery) that already had several sonographic criteria for the diagnosis of MAP have been reported.

Inclusion criteria:

- Patients who had conservative management of MAP.

Exclusion criteria: (who are not fit for hysteroscope)

1- Active pelvic infection.

2- Cervicitis.

3 - Cervical or endometrial cancer.

Study groups:

- **Group A:** include women who had cervical reconstruction.
- **Group B:** include women who had devascularization procedure (uterine artery or internal iliac artery or both).

There should be matching between two group in (age, parity, previous section, risk factor).

Methodology:

The study will be conducted at Ain Shams Maternity hospital on all patient had uterine conservation for MAP which were diagnosed by the following criteria:

Placenta previa anterior overlying the scar with criteria suggesting invasion by US, MRI and color Doppler imaging.

- Myometrial thickness less than 1 mm.
- Large placental blood lakes defined as placental lacunne by Doppler US enhancement.
- Loss of hypoechoic retroplacental zone ***(Bowman et al., 2014).***

After taking informed written consent about possible complication, all women recruited in the study and underwent conservative surgery after three months will subjected to:

- **History taking:** age, parity, operative data of uterine conservation, menstruation, postoperative infection, blood transfusion during the operation, duration of stay at hospital after surgery, take oral contraception or not.
- **Examination:**
  - General examination (tempreture, pulse, blood pressure).
  - Abdominal examination.
- **Diagnostic hysteroscopy:**

All patients (both group A and group B) will undergo office procedure (outpatient diagnostic hysteroscopy) without anaethesia.

- A rigid 2.9 mm hysteroscope will be used
- Normal saline will be used for uterine distension.
- 3 hour before using hysteroscope 200 microgram misoprostol moisted with saline solution will be inserted into the posterior fornix to make cervical ripening.
- No need for prophylactic antibiotic.

Then the patient will asked to empty her bladder, the patient will be positioned in the lithotomy position, The patient perineum should be just past the edge of the Table, vaginal wash with saline solution will be performed without placing speculum, Before the hysteroscpe and sheath insertion into the external os, the sheath will flushed to remove the air ***(Pellegrino, 2002).***

The hysteroscope will be driven to the posterior fornix to readily visualize the portio and slowly backwards to identify the cervix. When this became visible, the hysteroscope will be carefully moved forward to the

cervical canal and then the uterine cavity with least possible trauma. The uterine cavity will be systematically explored by rotating the fore-oblique scope in order to discover any abnormality in the uterus and the right and left tubal ostia, After that, the hysteroscope will be removed and the patient will be kept in the supine position for a few minutes to avoid vasovagal attack ***(Carneiro, 2010)).***

- **Outcomes and analysis:**

1- Primary outcome:

Assess uterine cavity as regard post operative intrauterine adhesion.

2-Secondary outcomes:

- Regular menstrual cycle with average amount.
- Intrauterine adhesion (mild, moderate, sever).
- Thining of the scar.
- Diagnosis of endometritis.

Medical and clinical application:

Uterine conservation preserves the uterine cavity.

Ethics:

The study will be approved from the Ethical Committee of the Departement of Obestatric and Gynacology, Faculty of Medicine, Ain Shams University. Informed written consent will be taken from all women before recruitment in the study, and after extensive explanation and clear discussion of risks and benefits.

Confidentiality:

Only the patient number and patient initials will be recorded in the CRF, the investigator will maintain personal patient identification list (patient numbers with the corresponding patient name) to enable record to be identified.

Protocol approval:

Before the beginning of the study and in accordance with the local regulation followed, the protocol and all corresponding documents will be declared for ethical research approval by the council of GYN \OBS department, Ain Shams University.