

# بسم الله الرحمن الرحيم



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شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم





## جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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# The role of bilateral internal iliac artery ligation in minimizing blood loss prior to Cesarean Hysterectomy patients with Abnormally Invasive Placenta

### Thesis

Submitted For Partial Fulfillment of Master Degree in Obstetrics and Gynecology

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### List of Contents

Title	Page No.
List of Tables	i
List of Figures	ii
List of Abbreviations	iii
Protocol	
Introduction	1
Aim of the Work	12
Review of Literature	
Placenta Accreta	13
Diagnosis and Management of Abnormally Placenta	
Role of Internal Iliac Artery Ligation	33
Patients and Methods	
Results	53
Discussion	61
Summary	66
Conclusion	
Recommendations	
References	
Arabic Summary	

### List of Tables

Table No.	Title	Page No.
Table (1):	Primary and secondary uterine pathol reported to be associated with pla accreta spectrum (PAS) disorders	centa
<b>Table (2):</b>	Unified descriptors (EW suggestiaotnal for ultrasound finding placenta accreta spectrum (PAS) disord	gs in
<b>Table (3):</b>	One step conservative surgery approach placenta accreta spectrum (PAS) disord	
<b>Table (4):</b>	Stepwise surgical approach for pla accreta spectrum (PAS) disorders	
<b>Table (5):</b>	Demographic characteristics among studied groups	
<b>Table (6):</b>	Hysterectomy duration (minutes) at the studied groups	
<b>Table (7):</b>	Blood loss (mL) among the studied gro	ups56
<b>Table (8):</b>	Hemoglobin (gm/dL) among the st groups	
<b>Table (9):</b>	Hematocrit (%) among the studied grow	ups58
Table (10):	Blood transfusion among the str	
<b>Table (11):</b>	Injuries among the studied groups	60

### List of Figures

Fig. No.	Title	Page No.
Figure (1):	Gray-scale ultrasound for the diagnormal placentation: visualizati placental lacunae	on of
Figure (2):	Gray-scale ultrasound for the diagnormal placentation: interruption echogenic line at the uterine—blinterface	on of ladder
Figure (3):	Anatomy	34
Figure (4):	Anastomosis	
Figure (5):	Anatomy of the internal iliac artery	39
Figure (6):	Approach of ligation	40
Figure (7):	Ligature.	41
Figure (8):	Flow chart of the studied cases	53
Figure (9):	Hysterectomy duration among the st groups	
Figure (10):	Blood loss among the studied groups.	
Figure (11):	Hemoglobin among the studied group	os 57
<b>Figure (12):</b>	Hematocrit among the studied group	s58
<b>Figure (13):</b>	Blood transfusion among the st	
<b>Figure (14):</b>	Injuries among the studied groups	60

### List of Abbreviations

Abb. Full term
ACOG American College of Obstetricians and Gynecologists
AIP Abnormally invasive placenta
CBC Complete blood picture
CH Cesarean hysterectomy
CIConfidence interval
CS Caesarean section
EDD Estimated date of delivery
EW-AIP European Working Group on Abnormally Invasive Placenta
GA Gestational age
ICU Intensive care unit
LMP Last menstrual period
MAP Morbidly adherent placenta
MRI Magnetic resonance imaging
PAS Placenta accreta spectrum
RHRhesus factor
SPSS Statistical Package for Social Sciences



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

Title of the Protocol: The role of bilateral internal iliac artery ligation in minimizing blood loss prior to Cesarean Hysterectomy patients with Abnormally Invasive Placenta.

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

Bilateral internal artery ligation is a common procedure in management of cases of abnormally Invasive Placenta. The current study will focus on the effect of this procedure in minimizing blood loss for cases managed by Cesarean Hysterectomy.

#### 1)INTRODUCTION /REVIEW

Abnormally invasive placenta (AIP) is a term that describes cases in which there is complete or partial failure of separation of the placenta from the uterine wall following delivery of the fetus(Chantraine & Langhoff-Roos 2013)

Abnormally invasive placenta has become a main cause for maternal morbidity and mortality in both low and high-income countries(Shao & Pradhan 2012). Surgical complications as urologic and bowel injuries, infection, fistula formation, and systemic complications associated with massive blood loss and transfusion are the main causes of morbidity. Also, there is a marked rise in maternal mortality reaching 7% in cases associated with abnormally invasive placenta (O'Brien et al. 1996). Previous caesarean section (CS) delivery is the most important risk factor associated with the increased incidence of abnormally invasive placenta.Planned Cesarean Hysterectomy is the recommended management technique in abnormally invasive placenta according to ACOG to reduce the complications such as massive bleeding, risks of disseminated intravascular coagulation, infection, acute respiratory distress syndrome, renal failure, and death (Silver et al. 2006), (Solheim et al. 2011)

Cesarean hysterectomy (CH) for Abnormally invasive placenta is considered as one of the most challenging surgeries: with an average mortality rate of 4.8% for emergency peripartum hysterectomy. Although lower mortality rates may be recorded in elective than emergency surgery, still Caesarean Hysterectomy for Abnormally invasive placenta remains the most difficult obstetric surgery.

#### Protocol 📚

Intraoperative bleeding was found to be the major cause of mortality in Cesarean Hysterectomy cases. The primary focus of the adopted techniques was to reduce the pelvic circulation, supplied mainly from the internal iliac arteries or their branches.

Internal Iliac Artery ligation has been a surgical technique utilized to reduce hemorrhage during pelvic and obstetrical surgeries. Hypogastric artery ligation has the potential of being a life-saving measure

that has been used when other more common modalities fail.(Al-Khan et al. 2018).

The technique has been used to reduce pelvic blood flow when intraoperative hemorrhage is anticipated.(Kidney et al. 2001) The theoretical physiological change that occurs after internal iliac artery ligation is a decrease in pulse pressure transforming an arterial system into a venous system, which decreases blood flow and therefore blood loss.

#### 2) AIM/ OBJECTIVES

The aim of this study is to detect the role of bilateral internal iliac artery ligation in minimizing blood loss, prior to performing Cesarean Hysterectomy in cases with confirmed preoperative or intraoperative diagnosis of Abnormally invasive placenta.

#### 3) METHODOLOGY:

#### Patients and Methods/ Subjects and Methods/ Material and Methods

- Study design: prospective non randomized trial.
- Patients and Settings: Patients And Setting: patient who attend for delivery in the labor ward in Ain Shams Maternity Hospital.
- <u>Population</u> pregnant women with abnormally invasive placenta in ultrasound managed by cesarean hysterectomy at Ain Shams maternity hospital

#### **Sample size justification:**

Using PASS11 Program for sample size calculation, and according