Emergency Peripartum Hystrectomy in Ain Shams Maternity Hospital in Last 3 years (2011-2013). A Retrospective Review

Thesis
Submitted for partial fulfillment of the Master degree of Obstetrics and Gynecology

By

Samir Ahmed Asem Abdel Samie

Resident of Obstetrics & Gynecology
Ain Shams University Maternity Hospital
(MBBch of Medicine , Ain Shams University, 2009)

Supervisors

Prof. Magdy Hassan Koleib

Professor of Obstetrics & Gynecology
Ain Shams University

Dr. Amr Helmy Yehia

Lecturer in Obstetrics & Gynecology
Ain Shams University

Faculty of Medicine
Ain Shams University
2015

استئصال الرحم الطارئ في الفترة المحيطة بالولادة في مستشفى عين شمس النساء و التوليد في آخر ٣ سنوات (٢٠١١-٢٠١٣)

رسالة

مقدمة توطئة للحصول على درجة الماجستير في أمراض النساء و التوليد

مقدمة من

سمير أحمد عاصم عبد السميع

طبيب مقيم, قسم أمراض النساء و التوليد

جامعة عين شمس

(بكالوريوس الطب, جامعة عين شمس,٢٠٠٩)

تحت إشراف

أ.د. مجدي حسن كليب

أستاذ أمراض النساء و التوليد

جامعة عين شمس

د. عمرو حلمي يحيي

مدرس أمراض النساء و التوليد

جامعة عين شمس

كلية الطب

جامعة عين شمس

٢٠١٥

Acknowledgment

I would like to express my sincere appreciation and deepest gratitude to ***Prof. Magdy Hassan Kolieb,*** *Professor of Obstetrics and Gynecology, Faculty of Medicine- Ain Shams University; for his valuable help , kind supervision and continuous encouragement. Without his care, this work could never be within hands.*

I am also grateful and I would like to express my endless gratitude and appreciation to ***Dr. Amr Helmy Yehia,*** *Lecturer in Obstertrics and Gynecology, Faculty of Medicine – Ain Shams University. For his original idea, project design, valuable advices and kind supervision. His honest assistance and patience make me truly indebted to him.*

Finally, I would also seize the opportunity to dedicate this thesis to my family for their continuous encouragement and support.

LIST OF THE CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ACOG	American College of Obstetricians & Gynecologist
CCT	Controlled cord traction
CS	Caesarean section
EPH	Emergency peripartum hysterectomy
FIGO	The International Federation of Obstetrics & Gynecology
HIV	Human Immunedeficiency virus
ICU	Intensive care unit
MMR	Maternal mortality ratio
MRI	Magnetic resonance imaging
MSAFP	Maternal serum Alpha-feto proteins
NICU	Neonatal Intensive care unit
PPH	Postpartum Haemorrhage
RCOG	Royal College of Obstetricians & Gynecologists
TBAs	Traditional Birth Attendants

INTRODUCTION

Emergency peripartum hysterectomy (EPH) is a major surgical situation invariably performed in the setting of life threatening hemorrhage during or immediately after abdominal and vaginal deliveries ***(Baskett TF et al , 1998).*** Despite advances in medical and surgical fields, post-partum hemorrhage continues to be the leading cause of maternal morbidity and mortality.

EPH is the most dramatic operation in modern obstetrics and is generally performed when all conservative measures have failed to achieve haemostasis in the setting of life threatening hemorrhage. The unplanned nature of the surgery and the need for performing it expeditiously, compound matters. Moreover the acute loss of blood renders the patient in a less than ideal condition to undergo emergency surgical intervention. The predominant indications for EPH are placenta previa/accreta and uterine atony and EPH in some of them is unavoidable. However recognizing and assessing patients at risk and appropriate and timely intervention would go a long way in ensuring a better outcome in this otherwise difficult situation**. *(Stanco LM et al, 1993)***

DEFINITION

Peripartum hysterectomy, is defined as a hysterectomy performed after 20 weeks gestation at any time after delivery but within the first 6 weeks postpartum. The removal of the uterus at cesarean section is referred to as cesarean hysterectomy while the removal after vaginal birth is called postpartum hysterectomy ***(Baskett TF et al, 1998).***

INCIDENCE AND SCOPE OF THE PROBLEM

The first documented hysterectomy on a patient was performed at caesarean section in United States by Horatio Storer in 1869. Although the uterus was removed successfully, the patient died in 68 hours after surgery ***(Tuncer R et al, 1995).*** In 1876, Eduardo Porro of Milan described the first successful cesarean hysterectomy in which both mother and baby survived.

In modern obstetrics, the reported incidence of EPH varies from 0.24 to 8.9 per 1000 deliveries with the overall incidence of EPH is 0.5 per 1000 deliveries, but there are considerable differences in incidence in different parts of the world, depending on modern obstetric services, standards and awareness of antenatal care, and the effectiveness of family planning activities of a given community ***(Kacmar J,et al., 2003).***

In developing countries, a variable incidence of 2 to 6 per 1000 births has been reported, compared to 0.2 to 2.7 per 1000 births from developed countries. In Nigeria, the incidence of emergency peripartum hysterectomy ranges from 1.8 to 5.4 per 1000 births. In Pakistan, an incidence of 5.6 per 1000 births was reported, in India 2.6 per 1000 births, 0.63 in Saudi Arabia and in the United States of

America (USA) 1.2 to 2.7 per 1000 births. Lower incidence was reported in European countries like Norway, where 0.2 per 1000 births was reported, in Ireland and Netherlands 0.3 per 1000 births was reported from both countries***. (Sheiner E et al, 2003)***

A difference in the incidence of EPH is noted following vaginal delivery and cesarean section. While the incidence of EPH after vaginal delivery varies from 0.1 to 0.3/1000 deliveries and is rather constant between European and US studies, the incidence of EPH following CS varies widely between 0.17 and 8.7/1000 deliveries ***(Kastner E.S et al, 2002).*** This is attributed to the proportion of women with previous CS with the concomitant risk of placenta previa and accreta.

Severe postpartum hemorrhage was reported to occur in 6.7/1,000 deliveries worldwide. It is one of the leading causes of maternal mortality and morbidity and represents the most challenging complication that an obstetrician will face. The main causes of the uncontrollable hemorrhage necessitating an EPH have changed since the 1980s ***(Rossi AC et al, 2010)***.

Uterine atony and rupture have been overtaken by abnormal placentation in many studies. This is not only because of improved conservative management of uterine atony and a reduced incidence of uterine rupture due to the extensive use of the lower uterine segment incision in preference to the upper

uterine segment incision for cesarean section (CS), but also because of an actual increase in the incidence of the morbidly adherent placenta. Abnormal placentation, which refers to both placenta previa and the morbidly adherent placenta, is thought to be increasing because of the rising rate of CS.

Studies recently have consistently demonstrated that previous CS increases the risk of EPH and abnormal placentation is associated with a previous uterine scar. It is also established that the risk of EPH increases with the number of previous CS. Other factors that have been associated with EPH include advanced maternal age, multiparity, multiple gestations, and gestational diabetes. ***(Bai SW et al, 2003)***

The increasing incidence of the procedure in developed countries like USA and Canada. For example, in Canada from 1991 to 2000 the rate rose from 0.26/1000 deliveries to 0.46/1000 deliveries, despite proper utilization of effective antenatal and delivery facilities, has been attributed to the increasing caesarean section rate, which predisposes to placenta praevia and placenta praevia accreta, which are now the leading indications for emergency peripartum hysterectomy in developed countries. ***(Bakshi S et al, 2000)***

Placenta praevia predisposes to primary postpartum haemorrhage, because of inefficient contraction and retraction of

the lower uterine segment, following delivery of the baby or the placenta, while in addition, placenta praevia accrete may predispose to partial separation of the placenta, and with partial separation of the placenta, emergency peripartum hysterectomy is usually required to control haemorrhage.

This may explain why placenta praevia accreta, is presently the commonest indication for emergency peripartum hysterectomy in developed countries, because most of their patients are booked and deliver in health facilities, assisted by skilled providers, which may have reduced the incidence of ruptured uterus in their obstetric practice, and uterine atony among the indications for emergency peripartum hysterectomy. ***(Baskett TF et al, 2005)***

The preeminence of placenta praevia/placenta praevia accreta, as an indication for emergency peripartum hysterectomy, has been reported globally. This may be because of the increasing caesarean section rate worldwide, and the concomitant rise in the incidence of placenta praevia and placenta praevia accreta. In developed countries like The United States of America, the caesarean section rate is at a record high of 31.1% of all births, representing an increase of 30% in the past decade, probably because litigation and request caesareans are becoming commoner. In Aminu Kano Teaching Hospital, Kano, Nigeria, there has been an increase of 12% in the caesarean section rate

over the past decade, because of increasing awareness by the obstetricians, about reduction in maternal and perinatal morbidity, in order to ensure good quality of life. ***(Udoma E et al, 2003)***

The association between placenta praevia/placenta praevia accreta and previous caesarean delivery has been reported. Placenta praevia was recorded in 4.4 per 1000 second-birth singletons, whose first births were delivered by caesarean section, and 2.7 per 1000 second birth singletons, whose first births were delivered vaginally. In The United States of America, caesarean section for live birth is associated with a 47% increased risk of placenta praevia, in second pregnancy with a singleton. Placenta praevia accreta occurs in up to 15% of women with placenta praevia, and more in cases with previous lower segment caesarean section scar, because of decidual deficiency. ***(Kastner E.S et al, 2002)***

The higher incidence of emergency peripartum hysterectomy, in developing countries compared to developed countries, is because of the higher prevalence of risk factors of primary postpartum haemorrhage like grandmultiparity, cephalo-pelvic disproportion and prolonged obstructed labour/uterine rupture, previous caesarean section/myomectomy scar, and placenta praevia in developing countries, where majority of the maternity patients are unbooked, and deliver outside the health facilities unsupervised or poorly supervised. Essential obstetric care

facilities are poorly developed in developing countries. Most of the rural public hospitals and health centres are not functional 24 hours of the day, coupled with poor road network and transportation systems to the cities, which result in delay in getting appropriate care in labour, with the result that 70% of deliveries are conducted outside the hospitals, by unskilled birth attendants or Traditional Birth Attendants (TBAs). ***(Anita K. et al, 2005)***

In Nigeria 16.9% of women delivered on their own without assistance from anyone. In Pakistan 89% of women deliver at home, of these 80% are delivered by TBAs.

The high prevalence of unbooked patients, who labour and deliver outside the health facility poorly supervised in developing countries, has been attributed to socio-cultural barriers and aversion to western oriented programs like antenatal care and hospital delivery, as well as low literacy levels, female socioeconomic disadvantage from male gender dominance, poverty, poor access to available health facilities that are not free or subsidized, and upsurge in the use of spiritual homes as maternity centres, because of the belief that pregnancy complications are a result of spiritual attacks. ***(Adesiyun A.G. et al, 2008)***

The likelihood that mothers will consult a health professional for antenatal care, increase as the mother's educational level rises, increasing from 44% among women with