

PERIPARTUM HYSTERECTOMY: A LIFE SAVING PROCEDURE

SHABNAM NAZ, RAFIA BALOCH*, MOHAMMAD SALEEM SHAIKH**, REHANA PERVEEN***, SHAZIA AHMED

Department of Obstetric and Gynaecology, Chandka Medical College, Larkana*

Department of Surgery, Unit I, Chandka Medical College, Larkana**

Department of Obstetric and Gynaecology, Unit II, Civil Hospital, Karachi***

ABSTRACT

Objectives: To determine the frequency, indications, risk factors, maternal and perinatal out come of peripartum hysterectomy.

Study Design: Prospective case series study.

Setting & Duration: Sheikh Zaid Hospital for women Chandka Medical College, Larkana at Gynaecology and Obstetric Unit I between January 2007 to June 2008.

Methodology: All the patients who delivered singleton or twins babies and underwent hysterectomy in immediate post-partum period were included. Their outcome variables were entered on proforma and results were evaluated.

Results: The frequency of peripartum hysterectomy during study period was 0.55%. The most common indication was bleeding from uterine rupture 42.85% followed by placenta accrete 28.57% and uterine atony 23.80%. The mean age of patient was 35 years & the mean parity was 5. Complications occurred in 85.71%. All patients received blood transfusion and average transfusion were 4.8 units. The still birth rate was 28.57% over all perinatal mortality was 47.61% and maternal mortality was 14.28%. The average duration of hospital stay were 8.38 days.

Conclusion: Peripartum hysterectomy remains a necessary procedure for life saving in managing obstetrical hemorrhage refractory to other measures.

KEY WORDS: Peripartum Hysterectomy, Life Saving Procedure, Obstetric Hemorrhage, Ruptured Uterus, Maternal Morbidity and Mortality

INTRODUCTION

Peripartum hysterectomy is performed at the time of delivery or in the immediate post partum period and is one of the most severe complication in obstetrics and is related to significant maternal morbidity and mortality. Obstetrician still face peripartum hysterectomy in modern practice as it is an emergency procedure which

is not without risk. It is associated with severe blood loss, risk of transfusion, intra operative complications and significant post-operative morbidity.¹

In developing countries including Pakistan the maternal and child health care delivery system are poorly developed. Health data indicating the quality of maternal and child health in Nigeria confirmed high figures, contributing to this high figures are poverty and poor infrastructural facilities in a nation with a fast growing population without the appropriate means and effective strategies to cope with the situations.² In Pakistan the obstetric hemorrhage is amongst the three leading causes of maternal mortality and morbidity as in other developing countries and the emergency peripartum hysterectomy is an emergency life saving procedure that is mostly performed in cases of intractable obstetric hemorrhage.³ In modern obstetrics the over all incidence of Peripartum

Correspondence:

Dr. Shabnam Naz

H/No. 593-B, Johar Street,

Khatan Bazar Bander Road, Larkana.

Phones: 074-4043664.

E-mail: drshabnamnaz@hotmail.com

hysterectomy is 0.05 to 1% of deliveries, but there is a considerable difference in its incidence in different parts of the world depending upon modern obstetric services standard, awareness of the antenatal care and effectiveness of family planning activities of a given community. In Nigeria the incidence is 1 in 349% and 1.3/1000 births in south California.^{4,5} One local study conducted at Lahore general hospital showed frequency of Peripartum hysterectomy was 0.6%. Indications for Peripartum hysterectomy have also evolved in response to the advent of the improved antibiotic treatment, blood banking techniques and uterotonic agents, although uncontrollable hemorrhage and infection were once considered the principal risk factors.⁶ Contemporary data suggested that the vast majority of Peripartum hysterectomy occurs emergently in the setting of abnormal placentation or uterine atony which is the major risk factor for peripartum hysterectomy.⁷ Several studies reports a greater than 10 fold higher incidence of peripartum hysterectomy among the woman who have previously delivered by cesarean section. Another reported risk factor for Peripartum hysterectomy is multiple births and the rate of which is also increasing in developed world because of the assisted reproduction. The aim of this study is to determine the frequency, indications, risk factors, maternal and perinatal out come of peripartum hysterectomy.

METHODOLOGY

A prospective descriptive case series study was conducted at Shaikh Zaid Women Hospital Chandka Medical College (CMC), Larkana from 1st January 2007 to 31st June 2008. All patients who delivered singleton infant or twins at hospital or out side the hospital, booked or un booked who underwent hysterectomy in immediate post partum period (with in 24 hours of delivery) were included in this study.

Detailed history was taken, the patients relatives were counseled regarding need for hysterectomy and their high risk consent taken. Maternal characteristics such as age, parity, gestational age were recorded. Associated risk factors like placenta praevia in current pregnancy, previous cesarean delivery, induction/augmentation of labour, duration of labour, mode of delivery were recorded. The indication of hysterectomy, type of hysterectomy, pre and post operative Hemoglobin values, need for blood transfusion, post operative complications, hospital stay were recorded. Peripartum hysterectomy was defined as hysterectomy performed at the time of delivery or in the immediate post partum period. The hysterectomy was performed by consultants, senior registrars and senior medical officers. All the patients received prophylactic antibiotics and blood transfusion

peri-operatively.

Operative complications were defined as vascular, bladder, ureteral and bowel injuries, post operative complications were defined as adverse events that occurred as a result of the procedures. Febrile mortality was defined as a temperature of 38°C or more as any two consecutive days after Surgery but excluding the 1st day. Wound infection was defined as the presence of any two of the following: purulent discharge and or obvious cellulites, elevated temperature and positive wound culture. The results obtained were analyzed with the SPSS 10.0 relevant descriptive statistics like frequency and percentage were computed for presentation of qualitative variable like. Mode of delivery, indication of hysterectomy, maternal and neonatal outcome. Quantitative variable like maternal age, duration of hospital stay, total no of blood transfusion were presented by mean \pm standard deviation. Statistical significance was taken as $P < 0.05$.

RESULTS

During the study period total number of deliveries conducted at Gynaecology and Obstetric Unit I Sheikh Zaid Hospital for Women CMC, Larkana were 3754. Among them 2304 (61.37%) were delivered vaginally and 1450 (38.62%) delivered abdominally.

Peripartum hysterectomy were performed in 21 cases making the frequency of 0.55%. The rate of peripartum hysterectomy increased with advance maternal age. Mean age of patients was 35.29 ± 3.7 years with a range of 18-42 years & parity ranged from para 1 to 12. The parity distribution was positively skewed indicating the rate of peripartum hysterectomy increased with parity and mean parity was 5.14 ± 2.79 . Most of the patients were un booked for antenatal care they were referred. Using last menstrual period or previous ultrasound 76.19% of pregnancies were term and the gestational age range from 34-42 weeks. Among the 21 patients who went under peripartum hysterectomy 47.61% had previous cesarean section scar and 52.38% had no previous scar. Mode of delivery shows that 42.85 patients had abdominal delivery of partially or completely extruded from the ruptured uterus, 6 patients (28.57%) had cesarean section and 5 patients (23.80%) had normal vaginal delivery and one patient (4.76%) delivered with forceps. Seven (33.33%) patients had 2nd or 3rd trimester vaginal bleeding where as 6 were diagnosed with placenta praevia. Labour was induced in 4(19.04%) patients and augmented with syntocinon in 6(28.57%) patients. 17(8.95%) had singleton pregnancy and 4 (19.04%) had twin pregnancy. For indications refer Table I.

Indications	No. of cases	%
Ruptured uterus	9	42.85
Atony of uterus	5	23.80
Abnormal placentation	6	28.57
Couvelairs uterus	1	4.76

Table I. Indications of Hysterectomy

Subtotal hysterectomy was carried out in 18 patients 85.71% and TAH was done in 3 patients 14.28%. In this study maternal mortality was 14.28% (3 patients) all due to coagulopathy developed due to massive hemorrhage Table II. Maternal morbidity was analyzed. Anemia was found in almost every case, 4 patients (19.04%) went into acute renal failure they were shifted to urology department and were recovered and discharged at 19.04% patients developed urinary tract infections and leading morbidity was puerperal sepsis, wound disruption and bladder injury Table II. Intra and post-operative blood transfusion were given in all cases. The average amount of transfusion were 4.8 units. Perinatal mortality was 47.6%, 3 neonates were died due to sepsis and 2 due to birth asphyxia. Perinatal morbidity was mainly sepsis, Anemia and Jaundice Table III. Average stay in hospital was 8.38 days ranging from 7-21 days.

DISCUSSION

Hysterectomy in the peripartum period is a rare, but life saving emergency operation that is associated with both intra and post operative complications.

The frequency of peripartum hysterectomy is 0.55% in this study that is comparable 0.64% with the study

Table II. Outcome of Peripartum Hysterectomy

Maternal outcome	Total cases	%
Maternal mortality	3	14.28
Maternal morbidity		
Anemia	21	100
Acute Renal Failure	4	19.04
Bladder injury	1	4.76
Puerperal sepsis	4	19.04
Paralytic ileus	2	9.52
Wound disruption	3	14.28
Urinary Tract Infections	4	19.04

conducted by Bashir⁴ at Lahore General Hospital. It is found to be more frequent after abdominal delivery 71.42% than after NVD which is found to be consistent with other studies.⁸ In the developed countries, placenta accreta is the most common indication for peripartum hysterectomy, while ruptured uterus was one of the two leading indication for peripartum hysterectomy up till 1980s in the developed countries. In the present study it is the leading indication i.e. 42.88% which is similar to study conducted by Tahir at Punjab Medical College DHQ Hospital Faisalabad,⁵ and other similar studies reported from two different hospitals of Pakistan,^{8,9} Nigeria,¹⁰ and Saudia Arabia.¹¹ This high incidence of rupture uterus in our community indicates wide spread ignorance about pregnancy and child bearing, injudicious trial of scar and use of syntocinon in grand multipara by traditional birth attendants is the most important cause. Unplanned reproductive pattern giving rise to high parity has emerged as a significant causative factor.⁵

In patients that had rupture of gravid uterus which is the most common indication in this review, sub total hysterectomy was shown to be a safer procedure and may be quicker.¹² It is associated with less operative morbidity since the ruptured uterus is removed.¹³ Clark and Stanco reported 53% of their hysterectomies as subtotal. In this study maternal morbidity was 85.71% which is significantly higher than other studies. In study conducted by Tahir over all morbidity was 58%,⁵ In America by Paterison it was 30%, In North Jordan mortality was 42% while Barclay reported it to be 49.7%. In present study important causes of high morbidity were anemia and sepsis. Acute failure developed in 4 cases that recovered after appropriate treatment. Bladder injury was occurred in 1 case that was successfully repaired, no gut or ureteric injury was found.

Table III. Perinatal outcome

Outcome	No.	%
Perinatal death		
NND	3	14.28
Still Birth	6	28.57
IUD	2	9.52
Neonatal morbidity		
Sepsis	3	14.28
Jaundice	5	23.80
Birth Asphyxia	1	4.76
No complication	12	57.14

Maternal mortality was 14.28% which is comparatively higher in this study in contrast to Kwee¹⁴ who published a figure of 4% and Tahir⁵ who showed a 6% mortality. Engelsens,¹⁵ Castaneda,¹⁶ and Zelop,¹⁷ reported no maternal deaths in recently published studies.

The high maternal mortality and morbidity is due to delays in onset of the patient's problem and the arrival in tertiary referral centre leading to irreparable loss. The perinatal mortality of 52.38% was recorded in this study this is comparable to the 77% figure in the study conducted by Gbadebo² in Nigeria. Studies conducted at Netherland showed 6.3% of perinatal death.¹⁴ This high perinatal mortality in the presented study can be attributed to ruptured uterus, being the commonest indication for peripartum hysterectomy. In most of the patient the uterus ruptures before the patient arrives in hospital and they presented in a morbid state with the fetus already partially or completely extruded into the peritoneal cavity. Chatak,¹² Groene,¹⁸ reported high perinatal mortality of 93% and 100% respectively. It is note worthy from this study that the perinatal mortality following peripartum hysterectomy is greatly influenced by the leading indication for peripartum hysterectomy which is ruptured uterus and not the surgery itself. This may explain the wide disparity in the figures from developed countries and the current study.

CONCLUSION

The most common indication was found to be ruptured uterus followed by uterine atony. The commonest risk factor was advance maternal age, high parity and delivery by caesarean section. Peripartum hysterectomy remains a necessary procedure for life saving in managing refractory obstetrics haemorrhage .

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