



EMERGENCY PERIPARTUM HYSTERECTOMY IN A TERTIARY CARE HOSPITAL: A ONE-YEAR REVIEW

Obstetrics & Gynaecology

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ABSTRACT

INTRODUCTION: Peripartum hysterectomy is a life saving surgical procedure performed in the presence of life threatening haemorrhage when all the conservative measures have failed.

OBJECTIVES: The objectives of this study are to examine the incidence, risk factors, indications, outcomes of peripartum hysterectomy performed in a tertiary hospital, between October 2017 to September 2018.

MATERIALS & METHODS: It is a retrospective data analysis. The medical records of 30 patients who had undergone emergency peripartum hysterectomy between October 2017 to September 2018 were reviewed retrospectively.

RESULTS: There were 30 emergency peripartum hysterectomies out of 16887 deliveries, a rate of 0.18 %.90% of the hysterectomies were Caesarean hysterectomies. The commonest indication for hysterectomy was abnormal placentation followed by uterine atony and uterine rupture.

CONCLUSION: The higher incidence of emergency peripartum hysterectomy is because of the higher prevalence of risk factors like multiparity, previous caesarean section and cesarean section in the present pregnancy.

KEYWORDS

INTRODUCTION

Peripartum hysterectomy is a life saving surgical procedure performed in the presence of life threatening haemorrhage when all the conservative measures have failed. Such hemorrhage may be due to abnormal placentation (e.g., placenta previa and placenta accreta), uterine atony, uterine rupture, leiomyomas, coagulopathy or laceration of a uterine vessel that is not treatable by conservative measures. However, the advent of the uterotonic agents, along with alternative techniques such as the B Lynch suture and uterine artery and internal artery ligation, has further reduced the need for this radical surgery, which has a deep impact on maternal health and psychology, especially in women with low parity. It may be performed after caesarean or vaginal delivery. Major complications of peripartum hysterectomy include increased blood loss, as the procedure itself is attributed to substantial blood loss, and urinary tract injury.

The reported incidence of EPH varies from 0.4-2.5 per 1000 deliveries. 50-67% of peripartum hysterectomies occur following caesarean deliveries and the remaining following vaginal deliveries. This could be attributed to the proportion of women with previous CS with the concomitant risk of placenta previa and accreta.

METHODS

This descriptive study was conducted among pregnant women admitted for delivery at Vani vilas hospital, BMCRI, Bangalore.

Study design

Retrospective data analysis

Study period

October 2017 to September 2018

Inclusion criteria

All women who underwent child birth and underwent hysterectomy for obstetric indications, either during child birth or within the immediate postpartum period were included in the study.

Methodology

All the patients who underwent Emergency Peripartum Hysterectomy were identified from labour ward registers, operating room register. The case files of all the patients were reviewed regarding the maternal age, parity, previous history of caesarean delivery, mode of delivery, indications, type and complications of EPH.

RESULTS

Table 1: Data of obstetric intervention in our hospital during the study period

Total deliveries	16887	
Vaginal deliveries	12348	73.12%
Caesarean deliveries	4539	26.88%
Emergency peripartum hysterectomy	30	0.178%
Incidence of EPH	1.78 per 1000 deliveries	

Table 2: Distribution of cases according to residence

Rural	26	86.67%
Urban	04	13.33%

Table 2: Distribution of cases according to residence

Lower	26	86.67%
Lower middle	04	13.33%

Table 3: Distribution of cases according to socio economic status

Booked	03	10%
Unbooked/referred with no information about antenatal visits	27	90%

Table 3: Distribution of cases according to ANC status

Youngest woman to undergo hysterectomy was 18 yrs and oldest one was 35 yrs old.

Table 4: Distribution of cases according to age

AGE(YEARS)	COUNT	%
≤20	2	6.66%
21-25	11	36.67%
26-30	12	40%
31-35	5	16.67%

Table 5: Distribution of cases according to parity

PARITY	COUNT	%
Primi	3	10%
Gravida 2	11	36.67%
Gravida 3	13	43.33%
Gravida 4	3	10%

Table 6: Distribution of cases according to gestational age

Gestational Age	Count	%
Term	15	50%
Preterm	15	50%

Table 7.a: Indications for EPH in the study

Indication	COUNT	%
PLACENTA PRAEVIA	15	50%
ATONIC UTERUS	8	26.67%
RUPTURE UTERUS	6	20%
ADHERENT PLACENTA	1+2(2 cases associated with placenta previa)	3.33%+6.67% (=10%)

Placenta previa was the most common indication for EPH contributing to 50% cases. Out of these, 2 cases were associated with previous one CS and one with previous 2 CS. 2 of these cases were associated with placenta accreta; 1 with prev 1 CS, 1 with prev 2 CS (Table 7.b).

Second leading cause of EPH was atonic uterus occurring in 8 cases (26.67%). Each case underwent medical and conservative surgical management before decision of EPH was taken. Out of 8 cases, atony was associated with previous CS in 3 cases. 6 cases were multiparous. Abruptio was associated with 5 case of atonic PPH. Atonicity occurred while performing Caesarean section in 6 cases and after vaginal delivery in 2 cases (Table 7.b).

Table 7.b: Indications for EPH in the study

PLACENTA PRAEVIA	15	50%
• PREV. CS	3	10%
• ADHERENT PLACENTA	2	6.67%
ATONIC UTERUS	8	26.67%
• LSCS	6	20%
• VAGINAL DELIVERY	2	6.67%
• PREV. LSCS	3	10%
• MULTIPARITY	6	20%
• ABRUPTION	5	16.67%

Rupture uterus was indication in 6 cases (20%). Out of 6 cases, 2 cases occurred in unscarred uterus while 4 cases occurred in scarred uterus, 2 cases with 1 prev CS and 2 with 2 prev CS. 5 cases (83.33%) were multiparous (Table 7.c).

Adherent placenta was indication for EPH in 3 cases (10%). It was associated with history of one or more previous CS in 3 cases (2 with 1 prev LSCS and 1 with 2 prev LSCS). All 3 cases were multiparous and placenta previa was associated with 2 cases respectively. Out of 3 cases there were placenta accreta and placenta in creta in 2 and 1 cases respectively (Table 7.c).

Table 7.c: Indications for EPH in the study

RUPTURE UTERUS	6	
• SCARRED UTERUS	4	13.33%
• UNSCARRED UTERUS	2	6.67%
• MULTIPARITY	5	16.67%
• OBSTRUCTED LABOUR	1	3.33%
ADHERENT PLACENTA	3	
• PLACENTA ACCRETA	2	6.67%
• PLACENTA INCRETA	1	3.33%
• PREV LSCS	3	10%
• MULTIPARITY	3	10%
• PLACENTA PREVIA	2	6.67%

Table 8: Distribution of cases according to type of hysterectomy

Type of hysterectomy	Count	%
Subtotal hysterectomy	28	93.33%
Total hysterectomy	02	6.67%

On analysis of risk factors, multiparity was a risk factor in 90% cases. Placental factors (adherent or placenta praevia) being a risk factor in 18 cases. History of previous CS was present in 3 out of 13 cases of EPH done for placental causes. Previous CS and Obstructed labour were present in 14 and 2 cases respectively.

Table 9: Distribution of cases according to risk factors

Risk factor	Count	%
Multiparity	27	90%
Prev CS	11	36.67%
Placental factor	10	33.33%
Prev CS + Placental Factor	3	10%
Obstructed labour	2	6.67%

Wound sepsis (30%) and pyrexia (13.33%) were commonest

morbidity. 10% of the women went into shock. In spite of life saving procedure EPH, 3 (10%) women died. Indication for EPH among these 3 were atonic PPH (1), placenta previa (1) and rupture uterus (1).

Table 10: Maternal outcomes

MATERNAL MORTALITY	03	
• ATONIC UTERUS	1	
• RUPTURE UTERUS	1	
• PLACENTA PREVIA	1	
RECOVERED	27	90%
MORBIDITY		
• FEBRILE MORBIDITY	04	13.33%
• BLADDER INJURY	01	3.33%
• PARALYTIC ILEUS	01	3.33%
• WOUND SEPSIS	10	30%
• SHOCK	03	10%

On analysis it was found that every woman required blood transfusion.

Table 11: Use Of Blood Products

Number of units OF PRBC REQUIRED	Count	%
1	5	16.67%
2	12	40%
3	10	33.33%
4	3	10%

40% (n=12) newborns were born alive out of which three succumbed to death within 7 days of life in NICU due to birth asphyxia accounting for a perinatal mortality rate of 70%.

Table 12: Perinatal Outcome

	Count	%
Stillbirth	18	60%
Alive	12	40%

DISCUSSION

The incidence of peripartum hysterectomy in the present study was 0.178%. This rate is higher to that reported from Columbia (0.08%), US (0.06%) while the rate is lower to that reported from Nigeria (0.51%), China (0.22%). Two studies from India- Chawla et al and Rashmi MB et al reported 0.08% rate of EPH each. The higher rate of EPH in present study could be attributed by facts that our centre is the tertiary referral hospital receiving unbooked rural referral in very deteriorated and critical condition.

A high association of multi parity (90%) with EPH was observed in our study & similarly Patil R et al reported 92%. Chawla et al reported 82%. A study from the US concluded that higher-order births are associated with a 24-fold increase in the incidence of emergency hysterectomy. Grand multi parity is not as common as it was in some of the other studies due to the higher acceptability of family planning services, especially female sterilisation after two successful child births.

Atonic uterus contributed to 26.67% of the indications. Similarly Chawla et al showed 25% cases to be attributed to atonic PPH. Active management of third stage of labour (AMTSL) with strong effective uterotonic drugs available at periphery might be the cause for lesser incidence of atonic uterus and referrals for the same. Also because of recent advances in medical and conservative surgical measures (efficient uterotonic, compression of uterus, uterine catheters, step-wise devascularization of uterus) that will combat with PPH to save the uterus.

On analysis of risk factors for EPH, multiparity, previous LSCS and placental factors were common risk factors. Previous LSCS had prominent association with rupture uterus in 66.67% of cases, with morbidly adherent placenta in 100% of cases, with placenta previa in 26.67% of cases and with atony in 37.5% of cases. In a study by Chawla et al association were in 56%, 81% and 41.6% cases of rupture, adherent placenta and atony respectively. So placental causes of EPH had strong association with history of previous LSCS.

In the present study, most of cases had subtotal hysterectomy, as most cases were not fit for anesthesia & surgery and also didn't need total hysterectomy. This finding is similar to that reported in other studies. Subtotal EPH may be a better choice when surgery needs to be completed in a shorter time before the onset of hemo dynamic instability.

In Maternal morbidities, pyrexia and wound sepsis were the

commonest in present study similar to study by Patil R et al. All patients needed blood transfusion as incidence of anemia is very high in our region; similar results are reported in study by Patil R et al and Rashmi et al. Maternal mortality in our study was 10% that is lower than that reported by Chawla et al (18%) and Patil R et al (8.6%). High perinatal mortality rate (70%) found in this study similar to that reported by Patil R et al (62%).

CONCLUSION

Emergency peripartum hysterectomy is a necessary evil in obstetrics. Although it curtails the future child bearing potential of the woman, in many cases it saves the life of the mother. Women with previous caesarean section are at increased risk, both due to atonic and traumatic postpartum haemorrhage. Peripartum hysterectomy is life saving, if performed at the appropriate time. Most of these patients require intensive monitoring.

The need for a stringent protocol for managing postpartum haemorrhage cannot be over emphasised. Although EPH is infrequent in modern obstetrics, its rising incidence and its association with the mode of delivery and prior caesarean section reiterates the need for curtailing the caesarean section rates. Rising rates of cesarean section and multiple pregnancies are bound to increase the incidence of EPH in the future.

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