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### RESEARCH ARTICLE

#### PERIPARTUM HYSTERECTOMY -INCIDENCE, INDICATIONS, RISK FACTORS AND OUTCOMES AT A TERTIARY CARE HOSPITAL

Dr. Ravella Sowjanya, Dr. Polinati Vijaya Sheela, Dr. Ch Sai Praneetha Reddy, Dr. Gollapalli Aruna and Dr. Prasad Usha

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#### Abstract

**Introduction:** Peripartum hysterectomy is defined as a hysterectomy performed at the time, or within 24 hours, of delivery. It is a life saving procedure and becomes necessary when all medical and surgical methods fail to control bleeding. It is associated with significant maternal morbidity and mortality.

**Objectives:** To determine the incidence, indications, maternal and perinatal outcome of peripartum hysterectomy

**Methods:** A retrospective hospital based observational study of all women who underwent peripartum hysterectomy over a period of 2 years from January 2020 to December 2021 in the department of Obstetrics and Gynaecology, SIDDARTHA MEDICAL COLLEGE, VIJAYAWADA.

**Results:** A total of 20 peripartum hysterectomies were done during the study period. Incidence was 1.08/1000 deliveries. Main indications of peripartum hysterectomy were uterine atony (45%), abnormal placentation (30%), and uterine rupture (10%). Total abdominal hysterectomy was done in 15% cases and subtotal hysterectomies were done in 85% cases. There was one maternal death (5%) and 5 perinatal deaths (25%).

**Conclusion:** Atonic uterus is the commonest indication for peripartum hysterectomy. Previous scar, multiparity and abnormal placentation were the significant risk factors.

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#### Introduction:-

Emergency peripartum hysterectomy is a life-saving surgical procedure, which is performed to control massive hemorrhage. The incidence rate has estimated about 1.5 per 1,000 deliveries in developed countries [1-3]. In modern obstetrics, the overall incidence is 0.05%, 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 [4]. B-Lynch sutures have reduced the need for peripartum hysterectomy especially for atonic PPH.

#### Materials And Methods:-

This was a retrospective, hospital based study of all patients who underwent emergency peripartum hysterectomy during a two year period from January 2020 to December 2021. Data was collected from the medical records of

department of Obstetrics and Gynaecology, Siddartha medical college, Vijayawada. Maternal age, parity, gestational age, type of delivery, risk factors, indications and outcomes of EPH were collected in a structured proforma.

Inclusion criteria: All women who delivered between January 2020 to December 2021 after 24 weeks gestation and who underwent hysterectomy at the time of delivery. Women who delivered outside and referred were also included.

Exclusion criteria: women who were delivered before 24weeks and hysterectomy done for other than obstetric indications

Data was collected, tabulated and analysed using SPSS Version 22.

### Results:-

During the two year period, 18388 women delivered. 9984 delivered normally and 8404 by caesarean section. Peripartum hysterectomy was performed in 20 cases. Incidence was 1.08/1000 deliveries.

**Table 1:-** Demographic characteristics of patients who underwent Peripartum Hysterectomy.

Demographic charecteristics	Number of cases (n=20)	Percentage (%)
<b>Age</b>		
20-25 years	8	40%
25-30 years	9	45%
30-35 years	3	15%
<b>Referred cases(unbooked)</b>	12	60%
<b>Booked cases</b>	8	40%
<b>Parity</b>		
Primi	6	30%
Multi	14	70%

Most of the women were between age group of 25-30 years (45%), 20-25(40%), 30-35(15%) cases. 60% cases were referral cases and most of them were multiparas (70%).

(TABLE I)

**Table 2:-** Indications of peripartum hysterectomy.

Indication	Number of cases (n=20)	Percentage (%)
ATONIC PPH	9	45%
PLACENTA PREVIA	5	25%
ADHERENT PLACENTA	3	15%
RUPTURE UTERUS	2	10%
BROAD LIGAMENT HEMATOMA	1	5%
TOTAL	20	100%

The most common indication for emergency peripartum hysterectomy was atonic PPH (45%), followed by abnormal placentation (40%).(TABLE II)

**Table 3:-** Type of hysterectomy.

Type of hysterectomy	No of cases (n=20)	Percentage (%)
Total abdominal hysterectomy	8	(40%)
Subtotal hysterectomy	12	(60%)
TOTAL	20	100%

In 60% of cases subtotal hysterectomy was performed, while 40% of cases required total hysterectomy. Total hysterectomy was performed mainly for cases of low lying placenta, adherent or otherwise, where the removal of the cervix was considered mandatory for complete haemostasis.(TABLE III)

**Table 4:-** Postoperative complications.

Postoperative complications	No of cases (n=20)	Percentage (%)
Bladder injury	4	(20%)
Postoperative fever	12	(60%)
Sepsis	2	(10%)
Wound infection	3	(15%)
DIC	3	(15%)
DVT	1	(5%)
Blood transfusion	20	(100%)
ICU admission	16	(80%)
Need of vasopressors	8	(40%)

Most common maternal complication was febrile morbidity (60 %). Bladder injury occurred in 20%, disseminated intravascular coagulation in 15%, and wound infection in 15% of the women. Two patients had cardiac arrest on the operation table following massive postpartum haemorrhage. (TABLE IV)

**Table 5:-** Feto maternal outcomes.

Fetomaternal outcomes	No of cases (n=20)	Percentage (%)
Maternal mortality	1	(5%)
NICU admission	4	(20%)
Perinatal deaths	8	(40%)

There was one maternal death (5%) and 5 perinatal deaths (25%).NICU admissions were 4(20%).(TABLE V)

### Discussion:-

Storer performed the first cesarean hysterectomy in United States in 1869. Soon thereafter, Porro of Milan described the first cesarean hysterectomy in which the infant and mother survived. As a mark of honor, the procedure is frequently referred to as the Porro operation [5]. The incidence of peripartum hysterectomy is increasing in this era not because of improperly managed third stage of labor or obstructed labor but most likely because of increasing incidence of cesarean sections. Chances of repeat cesarean sections thus increase. This ultimately increases the incidence of placenta previa and accreta [6]

The incidence of peripartum hysterectomy was 0.4% in study done by Afaf RA [7] and Lah NA (2000). Other studies showed higher incidence than the present study like 2.6/1000 deliveries reported by Kant and Wadhwani et al. [8] (2005), Sahu et al. [9] (2004) reported and incidence of 2.006/1000 deliveries in their study and Marwah P et al. [10] (2008) recorded 3.2/1000 deliveries. In the present study the incidence was 0.1 % the reason may be due to the increased use of B-lynch and other compression sutures to control atonic PPH.

In the study by Priyanka et al [11] most of the patients undergoing EPH were multiparous (66.7%), and belonged to age group of 20-30years (83.3%), most of them were referred cases (66.7%). Abnormal placentation, multiparity, previous cesarean section were significant risk factors. In the present study, most of the women were between age group of 25-30 years (45%) and 60% cases were referral cases and most of them were multiparas (70%). A study conducted by Knight et al [12] concluded that EPH is strongly associated with age more than 35years and risk rises with parity greater than three and number of previous cesarean delivery.

The most common indication of EPH in the study by Priyanka et al was uterine atony (75%) followed by morbidly adherent placenta (25%) and uterine rupture (8.3%). In the present study, the most common indication for emergency peripartum hysterectomy was atonic PPH (45%), followed by abnormal placentation (40%).

### Conclusion:-

Peripartum hysterectomy is no doubt a life saving procedure but there is a shift in the indication towards placental causes. The increasing cesarian section rates have increased incidence of adherent placenta. However, atonic uterus

is still the commonest indication for peripartum hysterectomy. Previous scar, multiparity and abnormal placentation were the significant risk factors.

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