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Original Research Article

## A study of emergency peripartum hysterectomy in a tertiary care hospital

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### ABSTRACT

**Background:** Emergency peripartum hysterectomy is a lifesaving procedure done as a last resort to save mother's life. This study is to analyse the incidence, maternal characteristics, indications and complications following peripartum hysterectomy.

**Methods:** A retrospective analysis of emergency peripartum hysterectomy cases performed over a period of 3 years from January 2015 to December 2017.

**Results:** During the study period, 82 emergency peripartum hysterectomies were performed giving an incidence of 3.47/1000 delivery. Most of the women belong to the age group of 21-30 years (70.7%) and the women of parity two and three (65.8%). Atonic PPH was the most common indication accounting for 59.8% of cases followed by placenta accreta (19.5%).

**Conclusions:** Emergency peripartum hysterectomy remains a lifesaving procedure. Proper antenatal care, early referral, blood bank facilities and timely decision greatly influences maternal outcome.

**Keywords:** Atonic PPH, Obstetric hysterectomy, Placenta accreta

### INTRODUCTION

Emergency peripartum hysterectomy is a very challenging obstetric procedure which is done as a last resort to save mother's life on one hand, on the other hand, the mother's reproductive capability is sacrificed. Emergency peripartum hysterectomy includes hysterectomies done during caesarean section and after vaginal delivery or any time within the puerperium.<sup>1</sup> Incidence of emergency peripartum hysterectomy varies between 0.24-8.9 per 1000 deliveries which depends on the availability of good antenatal and obstetric care.<sup>2</sup> Uterine atony and rupture uterus was the most common indications for emergency peripartum hysterectomy. Recent studies have indicated a change in the trend

towards abnormal placentation which may be due to increasing tendency towards caesarean deliveries. Risk factors for Emergency peripartum hysterectomy includes advanced maternal age, multiparity, previous LSCS, placenta previa, operative vaginal delivery and fetal macrosomia.<sup>3</sup> We conducted this study to know the incidence, maternal characteristics, indications and complications of emergency peripartum hysterectomy.

### METHODS

It is a retrospective analytical study conducted at Government Mohan Kumaramangalam Medical College and Hospital over a period of 3 years from January 2015-December 2017.

**Inclusion criteria**

- Includes all women aged 18-40 years who underwent hysterectomy after 22 weeks of gestational age and within 6 weeks of delivery
- Women who underwent hysterectomy following both caesarean section and vaginal delivery
- Includes also women aged 18-40 years who delivered outside and referred to our hospital.

**Exclusion criteria**

- Patient who had hysterectomy following complications of MVA like perforation of uterus, uncontrolled haemorrhage
- Hysterectomy due to associated complications like pelvic mass or any other gynaecological conditions
- Hysterectomy due to uncontrolled haemorrhage following surgical management of ectopic pregnancy.

We included all admitted women who underwent hysterectomy during caesarean section and after vaginal delivery or anytime with in the puerperium for obstetric indications like atonic PPH, placenta accreta, traumatic PPH, rupture uterus, placenta percreta, secondary PPH. Postoperatively patient was kept under observation in ICU until patient got stabilised and closely monitored for postoperative complications like shock, DIC, renal failure, wound infection, paralytic ileus, febrile morbidity, pneumonitis. Apart from patients who delivered in our hospital, we also included the patients who referred to our hospital after delivery. Case record and operation registers was analysed in detail about the maternal profile (age, parity etc.), mode of delivery, indications and maternal outcome and study proceeded.

**RESULTS**

A total of 23,575 women delivered during our 3-year study period. Emergency peripartum hysterectomy was performed in 82 women. The incidence of emergency peripartum hysterectomy was 3.47/1000 deliveries.

**Table 1: Number of emergency obstetric hysterectomy.**

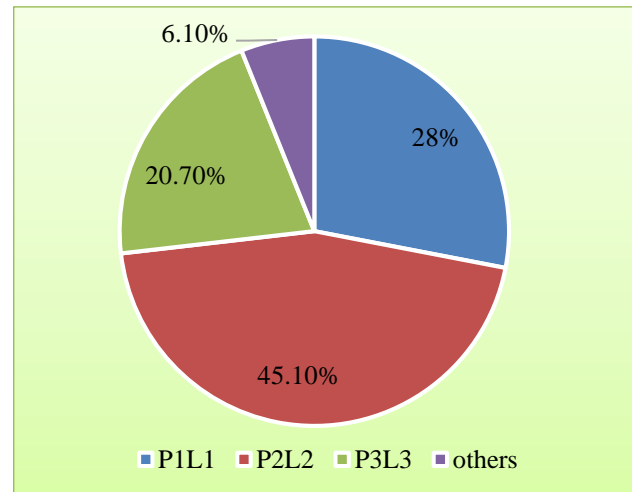
Year	No. of deliveries per year	No. of emergency obstetric hysterectomy per year
2015	6874	40
2016	7686	27
2017	9015	15

46.3% of the women were in the age group of 21-25 years and 24.4% of the women were in the age group of 26-30 years. 17.1% if the women were in the group of 15-20years. Remaining were >30 years.

**Table 2: Age of women.**

Age (years)	No. of patients	Percentage
15-20	14	17.1
21-25	38	46.3
26-30	20	24.4
31-35	5	6.1
36-40	5	6.1

Majority of the women were parity two and three which contributes about 65.8%. 28% of the women were primiparas and the remaining were grandmultiparas.



**Figure 1: Parity of women.**

Atonic PPH (59.8%) and placenta accreta (19.5%) were the two major indications for obstetric hysterectomy in our study. Traumatic PPH and placenta percreta contributed to 6.1% and 3.7% of the cases respectively. Other indications were rupture uterus (9.8%) and secondary PPH (1.2%). It was noticed that some women who underwent peripartum hysterectomy had two or more indications like placenta previa along with placenta accreta, traumatic PPH along with atonic PPH, placenta accreta was seen in a case of rupture uterus who had 2 previous LSCS.

**Table 3: Indications for emergency peripartum hysterectomy.**

Indications	No. of patients	Percentage
Atonic PPH	49	59.8
Placenta accreta	16	19.5
Rupture uterus	8	9.8
Traumatic PPH	5	6.1
Placenta percreta	3	3.7
Secondary PPH	1	1.2

Among the complications, febrile morbidity accounts for 40% of the cases, 30% of the cases which was referred from outside hospital was received in hypovolemic

shock, 22% had paralytic ileus postoperatively. 12% of the cases developed DIC.

**Table 4: Complications and postoperative morbidity.**

Complications	Percentage
Febrile morbidity	30
Wound infection	5
Paralytic ileus	14
Coagulopathy	8
Bladder injury	2
Shock	22
Renal failure	8
Pneumonitis	4

2 cases of rupture uterus were associated with bladder injury. Renal failure and pneumonitis was seen in 10% and 4% of the cases respectively.

## DISCUSSION

Peripartum hysterectomy was first done after caesarean section due to atonic PPH by Porro in 1876. The incidence of obstetric hysterectomy in the present study is 3.47 per 1000 deliveries which is higher than other studies; 0.2% by sahu et al, 0.15% by Mukherjee, 0.26% by Gupta because our institution is the important referral centre for the adjoining 6 districts.<sup>4-6</sup>

Identifying risk factors and patients at high risk for emergency peripartum hysterectomy is very important in reducing maternal morbidity and mortality. Risk factors include maternal age >35 years, multiparity, previous caesarean delivery, repeat caesarean deliveries.<sup>7</sup>

In the present study it is more common in age group of 20-30 years which is similar to the study by Saxena et al.<sup>8</sup> Atonic PPH was the commonest indication for emergency obstetric hysterectomy in the present study accounting for 59.8% of the cases which is similar to study by Agasthe and Marathe.<sup>7</sup>

Placenta accreta is the second most common indication in our study accounting for 19.5% of cases where as study by Nasima et al shows an incidence of 16.13%.<sup>8</sup> The most common indication for emergency peripartum hysterectomy in developed countries at present is morbidly adherent placenta. Kastner et al found placenta accrete to be the most common indication for emergency peripartum hysterectomy.<sup>9</sup>

In a study by Begum the incidence of abnormal placentation was 14.28% while in our study, placenta previa and placenta accreta together accounts for 23.2%. This rise in abnormal placentation is due to increasing caesarean section rate.

Another indication for obstetric hysterectomy was extension of tears and lacerations involving fornices

which accounts for 6.1% of cases which is similar to study by Noor who reported 7.9% of cases.<sup>10</sup> Postoperative pyrexia, paralytic ileus, AKI and wound infection are the common complications. Prolonged labor, intrauterine manipulation and dormant sepsis probably account for these complications. These could be prevented by early referral of these cases to well-equipped centre which can treat emergency obstetric cases promptly and efficiently

## CONCLUSION

Obstetric hysterectomy is a lifesaving procedure, but decision should be prompt and treatment by experienced surgeon. Every obstetrician should be trained to perform this procedure. In spite of life saving measure, there occurs significant number of maternal deaths which can be prevented by good maternal care, active management of labor, early recognition of complications, timely referral, and easy availability of transport and blood transfusion facilities. Community education about advantages of institutional delivery or delivery by trained dais will save many such emergencies.

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