

# Retrospective Analysis of Peripartum Hysterectomy among Patients: A Hospital Based Study

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## ABSTRACT

**Background:** Peri partum hysterectomies have been reported to be associated with intra operative and post-operative complications such as haemorrhage and infection which lead to severe maternal morbidity and sometimes mortality and yet it is a lifesaving intervention. Hence; we planned the present study to retrospectively assess patients who underwent peripartum Hysterectomy.

**Materials & Methods:** We planned to assess patients who underwent peripartum hysterectomy. A total of 50 patients were included in the present study. We collected medical records of all the patients that underwent peripartum hysterectomy. Demographic detail records of all the patients were also obtained. We studied the clinical profile; operative procedure varied, findings of the intraoperative period, postoperative follow-up records including the complications. Separate analysts were employed for evaluation of the data records. All the results were evaluated using SPSS software.

**Results:** Common indications of Peripartum Hysterectomy in the present study included placenta accrete, rupture uterus,

cervical pregnancy and atonic postpartum hemorrhage. Various postoperative complications occurring in the present study included bladder injury, wound infection, febrile morbidity, urinary infection, re-suturing and re-laparotomy.

**Conclusion:** Peripartum hysterectomy is a significant health related problem occurring among female patients.


**Key words:** Hysterectomy, Peripartum, Prevalence.

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## INTRODUCTION

Postpartum hemorrhage (PPH) is a life-threatening condition. Various drugs and surgical techniques have been developed over time, especially to preserve the uterus. However, in some circumstances, an emergency peripartum hysterectomy has to be performed often as the last resort in saving a woman's life. It is thus an unequivocal marker of severe maternal morbidity and mortality.<sup>1-3</sup>

Several studies have suggested an association of peripartum hysterectomy with previous delivery by caesarean section. Currently there is an increase in caesarean section rates worldwide. Reported caesar rates are 23% in United Kingdom, 29% in United States of America and up to 50% in Latin America and in South Africa ranges between 10 and 50 %. This will have a major public health implication to clinicians, the governments and the women in terms of cost, time and effect on health systems because of the increased demand of this procedure.<sup>4-6</sup> Peri partum hysterectomies have been reported to be associated with intra operative and post-operative complications such as haemorrhage and infection which lead to severe maternal morbidity and sometimes mortality and yet it is a lifesaving intervention.<sup>7-9</sup>

Hence; we planned the present study to retrospectively assess patients who underwent Peripartum Hysterectomy.

## MATERIALS & METHODS

We planned the present study in the department of Obstetrics & Gynecology, R.N.T. Medical College, Udaipur, Rajasthan, India. It included evaluation of patients who underwent peripartum hysterectomy.

A total of 50 patients were included in the present study Ethical approval was obtained from institutional ethical committee and written consent was obtained after explaining in detail the entire research protocol. We collected medical records of all the patients that underwent peripartum hysterectomy. Demographic detail records of all the patients were also obtained. We studied the clinical profile; operative procedure varied, findings of the intraoperative period, postoperative follow-up records including the complications. Separate analysts were employed for evaluation of the data records. All the results were evaluated using SPSS software. Chi- square test and student t test were used for assessment of level of significance. P- value of less than 0.05 was taken as significant.

**Table 1: Indications of Peripartum Hysterectomy**

Indications	No. of patients	Percentage
Placenta accrete	32	64
Rupture uterus	3	6
Cervical pregnancy	3	6
Atonic postpartum hemorrhage	8	16
Others	4	8
Total	50	100

**Table 3: Postoperative complications**

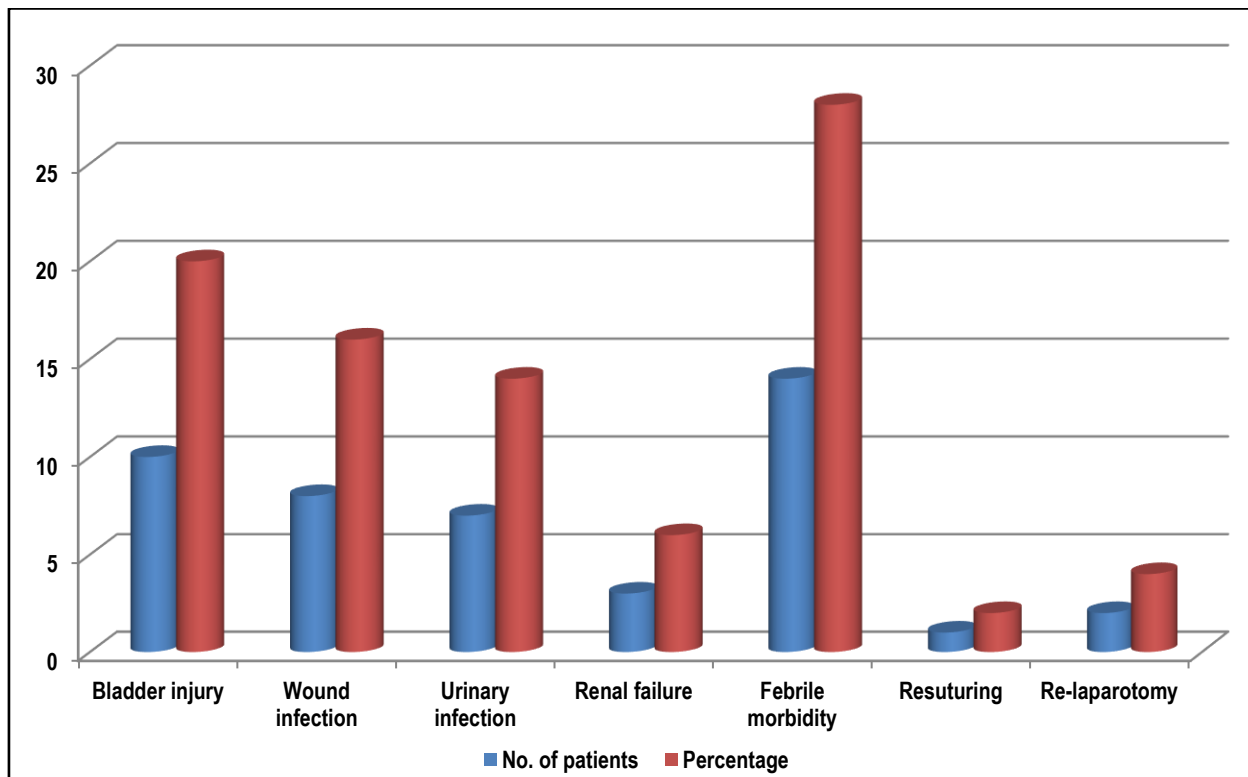
Postoperative complications	No. of patients	Percentage
Bladder injury	10	20
Wound infection	8	16
Urinary infection	7	14
Renal failure	3	6
Febrile morbidity	14	28
Resuturing	1	2
Re-laparotomy	2	4

**Table 2: Biochemical characteristic of the cases included in the present study**

Parameter	Value
Duration of surgery (minutes)	145
Preoperative hemoglobin (g/dl)	10.1
Fluid transfused intraoperatively (L)	6.5
Postoperative hemoglobin (g/dl)	9.5

**RESULTS**

We evaluated a total of 50 patients in the present study. Common indications of Peripartum Hysterectomy in the present study included placenta accreta, rupture uterus, cervical pregnancy and atonic postpartum hemorrhage. Mean duration of surgery included 145 minutes. Mean preoperative and postoperative hemoglobin values among patients of the present study included 10.1 and 9.5 g/dl. Various postoperative complications occurring in the present study included bladder injury, wound infection, febrile morbidity, urinary infection, re-suturing and re-laparotomy.



**Graph 1: Postoperative complications**

**DISCUSSION**

In the present study, we observed that common indications of Peripartum Hysterectomy in the present study included placenta accrete, rupture uterus, cervical pregnancy and atonic postpartum hemorrhage. Also different postoperative complications occurring in the present study included bladder injury, wound infection, febrile morbidity, urinary infection, re-suturing and re-laparotomy. Sharma B et al determined the incidence, surgery and anaesthesia-related issues of peripartum hysterectomies and to compare outcomes of emergency and electively planned peripartum

hysterectomies. This was a retrospective analysis of records of women who underwent emergency or elective peripartum hysterectomy in a tertiary care hospital. The study included all women who underwent peripartum hysterectomy in a teaching hospital and referral institute in North India over a span of 1 year (April 1, 2014, to March 31, 2015). Forty women underwent peripartum hysterectomy during the study period. The incidence was 6.9/1000 deliveries. In 16 (40%) cases, peripartum hysterectomy was planned electively while emergency

hysterectomy was done in 24 (60%) cases. Main indications of peripartum hysterectomies were placenta accreta (60%), atonic postpartum hemorrhage (PPH) (27.5%), and uterine rupture (7.5%). Intensive care management was required in 35% women postoperatively. The common maternal complications were febrile morbidity, bladder injury, disseminated intravascular coagulation, and wound infection. There were 4 maternal deaths following emergency peripartum hysterectomy done for atonic PPH whereas no mortality occurred in elective hysterectomy group. The most common indication for peripartum hysterectomy was placenta accrete. Electively planned peripartum hysterectomies with a multidisciplinary team approach had better outcomes and no mortality as compared to emergency peripartum hysterectomies.<sup>10</sup>

Govindappagari S et al characterized where women at risk for and undergoing peripartum hysterectomy delivered in terms of obstetric volume and procedural experience. They used data from the Perspective database to retrospectively evaluate trends in peripartum hysterectomy and deliveries at high risk for peripartum hysterectomy based on placenta previa and prior caesarean delivered from 2006 through 2014. Hospitals were categorized two separate ways for the analysis: (i) into five roughly equal quintiles based on annualized delivery volume, and (ii) by the mean number of hysterectomies performed annually over the study period. Four thousand eight hundred eleven hysterectomies occurred among 5,388,486 deliveries in 500 hospitals over the study period. The peripartum hysterectomy rate increased from 81.4 per 100,000 deliveries in 2006 to 98.4 in 2014. The prevalence rate of placenta previa in the setting of previous cesarean also increased over the study period. Between 2006-2008 and 2012-2014, the peripartum hysterectomy decreased in the lowest delivery volume quintile and increased in the highest delivery volume quintile (minus 14.9 per 100,000 deliveries, 95% CI -25.6 to -4.2) and (plus 35.4 per 100,000 deliveries, 95% CI 20.3 -50.5), respectively. Similarly, hospitals performing high rates of hysterectomies saw the largest increase over the study period. With peripartum hysterectomy rates increasing in the population, hospitals with high delivery volumes and high rates of hysterectomies saw the largest increases in peripartum hysterectomy rates.<sup>11</sup>

Wandabwa J et al determined the incidence, indications, associations and maternal outcomes of emergency peripartum hysterectomies. The incidence of 0.95% of peripartum hysterectomies (n=63 or 9.5/1000 births) increased with the increasing maternal age from 0.121% at age of less than 20 years to 0.5% at age more or equal to 30 years. Similarly the incidence increased with parity from 0.332% for Primiparity to 0.468% at parity of four or more. The indications for the operation were uterine atony 19/63 (30.2%), secondary haemorrhage/puerperal sepsis 17/63 (27%) and ruptured uterus 16/63 (23.4%). The main intra operative complication was haemorrhage 13/63 (20.6%). Repeat laparotomy was done in 10/63 (15%) of patients due to haemorrhage. Admission to intensive care unit was 25/63 (39.7%). The case specific mortality rate was of 19 % (n=12). The main causes of death were hypovolaemic shock and septicemia. The incidence of peripartum hysterectomies was high and was associated with ruptured uterus and puerperal sepsis which are preventable.<sup>12</sup>

## CONCLUSION

From the above results, the authors concluded that peripartum hysterectomy is a significant health related problem occurring among female patients. It is also associated with significant postoperative complications. However; further multidisciplinary studies are recommended.

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