

PERIPARTUM HYSTERECTOMY A CHALLENGING BUT LIFE-SAVING OBSTETRIC PROCEDURE

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ABSTRACT

Background: Emergency peripartum hysterectomy is a rare but critical obstetric procedure performed to control postpartum haemorrhage unresponsive to conservative management. The procedure is associated with significant maternal morbidity and requires timely recognition and skilled surgical management. This study aimed to evaluate the clinical profile, indications, outcomes, and complications of emergency peripartum hysterectomy in a tertiary care hospital. **Materials and Methods:** A retrospective analysis was conducted at MGMGH over one year, from March 2024 to February 2025, involving 18 women who underwent peripartum hysterectomy. Data were collected from hospital records on demographics, obstetric history, indications, management, and maternal outcomes. Data were analysed using IBM SPSS Statistics v27 and expressed as frequencies and percentages. **Result:** Most procedures were performed in women aged 26–30 years (50%), followed by 20–25 years and 31–35 years (16.7% each). Abnormal placentation was the leading indication (50%), followed by atonic postpartum haemorrhage (22%) and uterine rupture (11%). A previous caesarean section was noted in 44% of patients, and 89% of patients required massive blood transfusion. Postoperative complications included febrile morbidity (27.8%), bladder injury (16.7%), wound infection (11.1%), and stress-induced cardiomyopathy (11.1%). Maternal mortality was low. **Conclusion:** Emergency peripartum hysterectomy is a life-saving intervention for uncontrolled postpartum haemorrhage, most commonly indicated for abnormal placentation and uterine atony. Early recognition of risk factors, careful surgical planning, and multidisciplinary management are essential to reduce complications and improve maternal outcomes.

INTRODUCTION

An emergency peripartum hysterectomy is carried out when severe postpartum bleeding does not respond to available conservative measures. It is performed after 20 weeks of gestation, most often at the time of birth or within the first 24 hours, to prevent maternal death.^[1,2] In situations of major blood loss, many women arrive haemodynamically unstable, which limits the scope for additional interventions and narrows the time for surgical decision-making.^[3] When bleeding continues despite uterotonics, repair techniques, and other supportive steps, the surgical team may need to proceed with hysterectomy as the only remaining option to save the mother's life.^[4]

Peripartum hysterectomy is performed as a life-saving intervention when severe postpartum

haemorrhage cannot be controlled by standard medical or surgical methods. Placenta accreta spectrum, uterine atony, and related obstetric conditions are the most frequent causes of such bleeding.^[5] The risk increases in women with pre-eclampsia, placenta previa, or a history of caesarean delivery. Early antenatal diagnosis of high-risk placentation allows teams to plan the mode and timing of birth, which improves access to timely surgical care and may reduce maternal mortality.^[6] This procedure is also indicated in the presence of major complications. Uterine rupture is one such indication, although it occurs in only a limited proportion of cases. Severe pelvic sepsis, such as deep intrauterine infection or an infected surgical wound, may also necessitate hysterectomy when conservative treatment is ineffective.^[7] Emergency peripartum hysterectomy remains uncommon, yet its

incidence appears to be increasing in parallel with rising rates of placenta accreta spectrum and caesarean births. It is reported more often in low-income settings, typically in the context of uncontrolled haemorrhage or advanced infection after childbirth. Global estimates suggest an incidence of roughly 0.4–2.5 per 1,000 births.^[8] Hysterectomy can be performed in different forms: a partial (subtotal) hysterectomy removes the uterine corpus while the cervix remains intact, whereas a total hysterectomy involves removal of both the uterus and cervix. A radical hysterectomy removes the uterus, cervix, surrounding tissues, and sometimes the fallopian tubes, ovaries, and pelvic lymph nodes.^[9] Emergency peripartum hysterectomy is uncommon, yet it carries substantial risk and is frequently associated with abnormal placentation, uterine atony, or uterine rupture. The scarcity of regional data makes it important to document its clinical presentation and subsequent outcomes. The procedure occurs more often after caesarean birth and is associated with considerable maternal morbidity, requiring rapid and coordinated management by an experienced multidisciplinary team. This study was designed to describe the clinical characteristics, indications, outcomes, and complications of emergency peripartum hysterectomy in a tertiary care centre.

MATERIALS AND METHODS

This retrospective study was conducted on 18 women who underwent peripartum hysterectomy at MGMGH between March 2024 and February 2025. Ethical clearance was obtained, and informed consent was collected from all patients.

Inclusion Criteria

Women who underwent peripartum hysterectomy at MGMGH during pregnancy, childbirth, or the postpartum period were included.

Exclusion Criteria

Non-obstetric or elective hysterectomies, procedures performed outside the peripartum period, incomplete documentation, and cases referred after the hysterectomy had already been carried out elsewhere.

Methods

Data were obtained from hospital records and included patient demographics, obstetric history, relevant risk factors, indications for hysterectomy, details of management, and maternal outcomes. Perioperative information including the use of blood products such as packed red blood cells, fresh frozen plasma, platelets, and cryoprecipitate were reviewed. Massive transfusion was noted when a patient received five or more units of packed red cells within 24 hours. All women who underwent peripartum hysterectomy during the study period were identified, and the collected data were used to assess the indications, associated complications, and subsequent recovery. Data were analysed using IBM SPSS Statistics v27 and presented as frequencies and percentages.

RESULTS

Most procedures (9 patients, 50%) occurred in women aged 26–30 years. The 20–25 and 31–35 age groups each had 3 patients (16.7%). Women aged 35–40 accounted for 1 case (5.6%), and those over 40 years had 2 patients (11.1%) [Table 1].

Table 1: Age-wise distribution

Age group (years)	N (%)
20–25	3 (16.7%)
26–30	9 (50%)
31–35	3 (16.7%)
35–40	1 (5.6%)
>40	2 (11.1%)

Abnormal placentation occurred in 9 patients (50%), atonic postpartum haemorrhage in 4 patients (22%), uterine rupture in 2 patients (11%), and postpartum

uterine infection in 2 patients (11%). The 16 patients (89%) required massive transfusion [Table 2].

Table 2: Clinical characteristics and outcomes

Variable	N (%)
Total peripartum hysterectomies	18
Incidence	0.09 per 1000 deliveries
Abnormal placentation	9 (50%)
Atonic PPH	4 (22%)
Uterine rupture	2 (11%)
Postpartum uterine infection	2 (11%)
Previous LSCS	8(44%)
Primigravida women	2 (11%)
Massive transfusion required	16 (89%)

Five patients (27.8%) developed fever. Bladder injury occurred in three patients (16.7%). Two

patients (11.1%) had wound infections, and two others experienced stress-induced cardiomyopathy [Table 3].

Table 3: Postoperative complications

Complication	N (%)
Febrile morbidity	5(27.8%)
Wound infection	2(11.1%)
Bladder injury	3 (16.7%)
Stress-induced cardiomyopathy	2(11.1%)

DISCUSSION

This study aimed to describe the clinical features, causes, outcomes, and complications of peripartum hysterectomy in a tertiary care hospital. In 18 patients, the majority of women were aged 26–30 years, with abnormal placentation, atonic postpartum haemorrhage, and uterine rupture as the leading indications. Most patients had a history of previous caesarean section, and massive blood transfusion was frequently required. Postoperative complications included febrile morbidity, bladder injury, wound infection, and stress-induced cardiomyopathy, with low maternal mortality. Peripartum hysterectomy is challenging due to the emergency setting, massive blood loss, complex surgery, and high maternal risk. Most peripartum hysterectomies were performed in women aged 26–30 years, with smaller proportions in younger and older age groups. Similarly, Bharathi et al. of 28 women undergoing emergency peripartum hysterectomy, 42.9% were aged 26–30 years, and 32.1% were 21–25 years, with most between 21–30 years.¹⁰ Wakhloo et al. found that 40-case series of peripartum hysterectomy, 52.5% of women were aged 26–30 years, with a mean age of 27.9 years.^[11] Therefore, peripartum hysterectomy predominantly affects women aged 26–30 years; age-related risk awareness and targeted monitoring are recommended.

The main indications included abnormal placentation, atonic postpartum haemorrhage, and uterine rupture, with many patients requiring prior caesarean and massive transfusion. Similarly, Sahin et al. reported that the most common indications for emergency peripartum hysterectomy were abnormal placentation (50%), uterine atony (36%), and uterine rupture (9%). Total hysterectomy was performed in 24 patients (54%), mostly for abnormal placentation (75%), with maternal mortality in 2 patients (4.5%).^[12] Allam et al. in 149 emergency hysterectomies, 39.6% were performed for placenta accreta or increta, 24.8% for uterine atony, and 23.5% for uterine rupture.^[13] Begum et al. in 79 patients, placenta accreta accounted for 65% of emergency hysterectomies, uterine atony for 27%, and uterine rupture for 8%, with 88% of the women having a history of previous caesarean section.^[14] Kwee et al. reported that the primary indication for emergency peripartum hysterectomy was placenta accreta (50%), followed by uterine atony (27%).^[15] Thus, abnormal placentation is the leading indication

for peripartum hysterectomy; careful prenatal diagnosis and prior caesarean monitoring are advised. The most frequent postoperative complications were febrile morbidity, bladder injury, wound infection, and stress-induced cardiomyopathy in affected patients. Similarly, Sharma et al. reported that the most common maternal complication was febrile morbidity (27.5%), followed by bladder injury (20%), DIC (12.5%), wound infection (5%), with four maternal deaths (10%).^[16] Tamrakar et al. reported surgical site infection as the most common postoperative complication (33.3%) with no maternal deaths, while Vural et al. observed wound infection and febrile morbidity (26.7%), bladder injury (16.9%), DIC (11.2%), and 4% perinatal mortality.^[17,18] Rawashdeh et al. reported that one maternal and three neonatal deaths, with urinary bladder injury being the most common complication (27.1%); morbidity was similar for total and subtotal hysterectomy.^[19] Therefore, postoperative complications are common, mainly febrile morbidity and bladder injury; vigilant monitoring and prompt management are recommended.

Limitations

This retrospective single-centre study with a small sample size limits generalizability. Data completeness, variations in surgical management, absence of long-term follow-up, and lack of a control group may have influenced outcomes and interpretations.

CONCLUSION

Emergency peripartum hysterectomy is a life-saving procedure for uncontrolled postpartum haemorrhage, most commonly performed in women aged 26–30 years. Abnormal placentation, uterine atony, and uterine rupture are the main indications, often requiring prior caesarean and massive transfusion. Postoperative complications such as febrile morbidity and bladder injury are frequent but manageable, with low maternal mortality. Timely recognition, careful surgical planning, and multidisciplinary management are important to improve outcomes and reduce risks.

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