



EMERGENCY OBSTETRIC HYSTERECTOMY AS A LIFE SAVING PROCEDURE: A RETROSPECTIVE CLINICAL REVIEW

Obstetrics And Gynaecology

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ABSTRACT

Background: Obstetric hysterectomy is a life-saving procedure performed in emergency situations to prevent maternal mortality. **Objectives:** To study and analyze Obstetric Hysterectomies done over a 6 year period in our teaching hospital in terms of indications and complications. **Methods:** An original retrospective observational study of cases of emergency Obstetric Hysterectomy conducted in Shri MP Shah Medical College and Guru Gobind Singh Hospital, Jamnagar between January 2019 to December 2024. **Results:** 57 Obstetric Hysterectomies were performed during the study period. Owing to 52416 deliveries, the incidence of Obstetric Hysterectomy was 0.102%. Post Partum Haemorrhage was the commonest indication contributing to 80.7% of cases. All the patients were admitted to the ICU for the postpartum care. **Conclusion:** Emergency Obstetric Hysterectomy is indeed a life saving operation when used judiciously especially when patient fails to respond to other medical and surgical measures.

KEYWORDS

Retrospective study, PPH, Cesarean section, hysterectomy

INTRODUCTION

Emergency obstetric Hysterectomy is a surgical procedure, performed to remove the uterus during or after childbirth. It is performed when all the conservative measures have failed to achieve hemostasis, as a last resort to save a mother's life, sacrificing the mother's reproductive capacity.

Post partum haemorrhage is the leading cause of maternal deaths, contributing to one-third of the maternal deaths in the developing countries. With increase in the number of Cesarean deliveries, abnormal placental adherence and placenta previa have emerged as the most common indications in the developed countries.

MATERIALS AND METHODS

An original observational retrospective study of 57 cases of Obstetric Hysterectomy, during a period of 6 years (January 2019 to December 2024) at a tertiary care centre was conducted. All women who needed an emergency Obstetric Hysterectomy were included. Data was abstracted from individual admission file from medical record department. After collecting data from the operation theatre records, each patient case record was scrutinized with regards to incidence, age, parity, antenatal high risk factors, indications and complications along with the maternal outcome.

RESULTS

Out of 52416 deliveries the incidence of emergency obstetric hysterectomy in present study was 0.04% following vaginal deliveries and 0.12% following caesarean section. The overall incidence was 0.06% (0.6 per 1000 deliveries). Table 1 shows incidence of emergency obstetric hysterectomy in different confinements.

Table : 1 Incidence Of Emergency Obstetric Hysterectomy

Mode Of Confinement	Number Of Cases	Emergency Obstetric Hysterectomy	Incidence
Vaginal Deliveries	36395	15	0.04%
Caesarean Sections	16021	20	0.12%
Outside deliveries	1273	20	1.57%
MTP	2089	2	0.09%
Total confinements	55778	57	0.102%

Table 2 shows the indications of emergency obstetric hysterectomy. The most common indication of emergency hysterectomy was postpartum haemorrhage present in 41(71.9%) cases, in which 19(46.34%) cases were due to atonic uterus, 10(24.39%) cases were due to traumatic PPH, 8 (19.51%) cases had both atonic and traumatic PPH and 4(9.75%) cases were due to central placenta previa without accreta. In our study, morbidly adherent placenta was present in 6(10.52%) cases, in which previous caesarean section and placenta

previa were also co-existent. Third common indication was uterine rupture, observed in 10 (17.54%) cases in which 5 (50%) cases were due to rupture of previous caesarean scar and other 5 (50%) cases were due to other causes like excessive uterine contractions, grand multiparity etc.

Table : 2 Indications For Emergency Obstetric Hysterectomy

Indication Of Emergency Obstetric Hysterectomy	No Of Patients (n=57)	Percentage
Postpartum Haemorrhage	46	80.7%
Atonic	19	46.34%
Traumatic	10	24.39%
Both	10	21.73%
Central placenta Previa without accreta	7	15.21%
Morbidly Adherent Placenta	1	1.75%
Previous Caesarean and placenta previa with accreta	1	100%
Rupture Uterus	10	17.54%
Rupture of caesarean scar	5	50%
Uterus rupture	5	50%

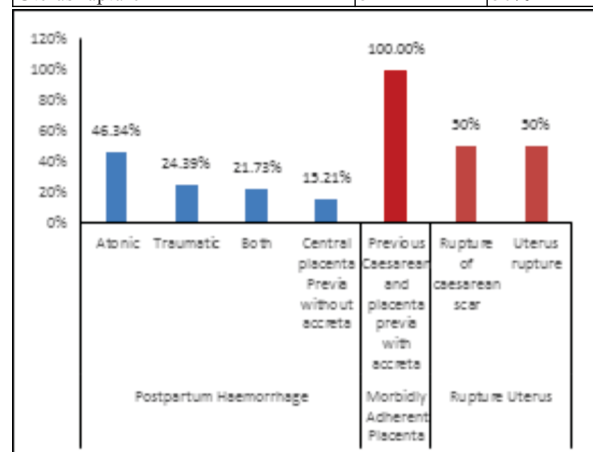


Table 3 shows the complications associated with the Emergency obstetric hysterectomy. The most common complication febrile illness which was present in 28 (49.12%) cases. The second common complication was paralytic ileus, seen in 10(17.54%) cases, while other complications were DIC in 5 (8.77%) cases, wound sepsis 4(7.01%), septicemia 4(7.01%) and shock 6(10.52%) cases. There was no maternal death in our study.

Table : 3 Maternal Complications

COMPLICATIONS	NO OF PATIENTS	PERCENTAGE
Febrile Illness	28	49.12%
DIC	5	8.77%
Septicemia	4	7.01%
Wound Sepsis	4	7.01%
Paralytic Ileus	10	17.54%
Shock	6	10.52%

All (100%) cases required blood and multiple blood product transfusions compared with the study by Preeti Lewis et al.^[16]. In the present study, 16 (57.14%) of babies went home alive and 12 (42.8%) were IUFD whereas 2 cases were second trimester MTP done for congenital anomaly with a history of previous cesarean section 9 months ago and other done for the associated perineal hematoma.

DISCUSSION

The rate of post partum hysterectomy varies amongst hospitals, ranging from 0.03% to 0.33%^[4-6]. It is performed in the setting of life-threatening haemorrhage. The incidence of Obstetric hysterectomy in present study is 0.102%. Most of our patients were between 30-35 yr age group (42.10%) with high association to multiparity.

During the study period there were a total number of 52416 deliveries in our institution out of which 36395 (69.4%) were vaginal deliveries and 16021 (30.5%) were caesarean deliveries.

57 women underwent emergency obstetric hysterectomy during this study period. The overall incidence was 0.6 per 1000 deliveries (0.06%) in our study which is also comparable to reported by 0.4/1000 in New Zealand⁸ and East Africa⁸, 0.48/1000 in Israel⁹ and Great Britain¹⁰ to 1.74/1000 in the USA¹¹.

A retrospective study conducted in India reported the incidence of obstetric hysterectomy at approximately 0.4%, with the leading indications being postpartum hemorrhage (41.1%), uterine rupture (29.4%), and morbidly adherent placenta (23.5%).¹⁸

According to National Family Health Survey (NFHS-5, 2019–21), the prevalence of hysterectomy among women aged 15–49 years varies by state eg. Andhra Pradesh: 8.7%, Gujarat: 4.0%, West Bengal: 7.05%, Sikkim: 0.8%. The national average stands at approximately 3.3%.^{19,20}

The rate of emergency obstetric hysterectomy was 0.4/1000 vaginal deliveries and 0.12/1000 caesarean deliveries. The caesarean section rate in the study period was 30.5%. The primary reason for this higher incidence is due to the fact that our hospital is a referral centre to most of the primary health care centres in surrounding rural area.

The most common indication of emergency hysterectomy was post-partum haemorrhage 46 (80.7%) cases, in which 19(46.34%) due to atonic uterus, 10(24.39%) due to traumatic PPH and 7 (15.21%) due to central placenta previa without accreta. The placentas in these 7 cases were removed completely with the membranes intact but there was profuse bleeding from the lower uterine segment. The hemostatic sutures were tried but due to excessive softness and friability of the tissue, the bleeding was not controlled, so the decision of OH was taken. The incidence of uterine atony decreased due to wide use of preventive medical and surgical approaches (uterotonics, stepwise devascularization, and Blynch/Hayman/Cho suture/Internal Iliac Artery ligation) and an increase in antenatal care. A reduction in hysterectomies due to uterine atony has also been attributed to government-led training programs in emergency obstetric care for obstetricians, along with the implementation of well-coordinated hemorrhage management protocols at high-volume, specialized maternity centers.

Second most common indication was morbidly adherent placenta 1(1.75%), associated with previous caesarean section and placenta previa. The risk of morbidly adherent placentation increases proportionally with the number of caesarean deliveries or curettages¹² as these procedures disrupt the normal endometrial - myometrial interface. This findings underscores the growing global concern regarding the rising cesarean section rates and their long term implication, particularly in low resource settings where prenatal diagnosis may be limited and surgical management of adherent placenta poses significant challenges.

Third common indication in our study was uterus rupture 10(17.54%),

five of which were due to rupture of previous caesarean scar, extending into the lower uterine segment and leading to formation of broad ligament hematoma. The incidence is similar to finding from other centres in Nigeria¹¹.

The most frequently observed complication was febrile illness, reported in 28 cases (49.12%), followed by paralytic ileus in 17.54% of patients. Other notable issues included prolonged labor, antepartum hemorrhage, anemia, and obstructed labor. These conditions likely contribute to increased risk during intrauterine manipulation for placental removal. Wound sepsis occurred in 4 (7.01%) of cases, septicemia 4 (7.01%) and shock 6 (10.52%) cases while disseminated intravascular coagulation (DIC) was seen in 5 (8.77%) of patients.

Emergency obstetric hysterectomies are particularly prone to complications due to altered pelvic anatomy and increased vascularity during pregnancy. The enlarged uterus and fragile pelvic tissues increase the likelihood of trauma. Blood transfusions, commonly required in these cases, raise the potential for transmission of infections like hepatitis or HIV, especially when patients are under immunosuppressive therapy.¹⁴

As reported by Alka Singh et al., complications in emergency obstetric hysterectomy include fever of unknown origin (2.2%), wound infections (11.1%), fluid overload (11.1%), ascites (11.1%), peritonitis (11.1%), intraperitoneal hemorrhage (11.1%), VVF (11.1%) and bladder injury (11.1%)¹⁵.

This study had a number of drawbacks, one of them being that its findings were derived on retrospective data from a single centre with a rather small sample size. Hence, these findings need to be interpreted cautiously.

CONCLUSION

Obstetric hysterectomy is a life saving intervention, having an essential yet limited role in management of severe obstetric haemorrhage, particularly in resource limited settings. Nevertheless, the prevalence of Obstetric hysterectomy has seen a decline due to advancements in modern obstetrics and emerging treatments for adherent placentas and post partum haemorrhages. Some research suggests a decline in the absolute number of hysterectomies performed with rates decreasing from 371.53 per 100,000 women per year in 2005 to 239.85 per 100,000 women in 2019.²¹ Ultrasound, color flow doppler, and magnetic resonance imaging are useful to identify high-risk patients.

A successful Obstetric Hysterectomy can save many more near miss cases and is a life-saving treatment. Effective clinical judgement, surgical proficiency and prompt decision making are critical to the result. This study reinforces the need for continuous training in emergency obstetric care, rational use of cesarean sections and strengthening of peripheral health services to minimize delays in care. Attempts should be made at careful selection of patients for Cesarean delivery. Timely decisions and meticulous care, along with appropriate and quick resuscitation can reduce the morbidity and mortality.

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