

ANALYSIS OF OBSTETRIC HYSTERECTOMY DONE OVER A PERIOD OF 7 YEARS IN A TERTIARY CARE CENTRE

Gynaecology

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ABSTRACT

Background: Although rare in modern obstetrics, emergency obstetric hysterectomy (OH) remains a life-saving procedure, in the event of uncontrollable postpartum haemorrhage. Observations regarding the indications and outcomes of OH provide valuable insights relevant to the current management perspectives in obstetrics. This study intends to assess the incidence, indications, and outcomes of OH, at a Tertiary care referral institute.

Methods: An observational analytical study was conducted as a retrospective analysis over a span of 7 years June 2011-June 2018, in the department of obstetrics and gynecology, at a tertiary care centre. Cases of OH were analyzed for incidence, gestational age, parity, mode of delivery, indications for OH and outcomes of the procedure.

Results: The incidence rate was 1 per 1000 deliveries. Atonic post partum haemorrhage (PPH) was the most common indication 37.1%. 31.4% of the cases had an indication of abnormal placentation. 57.14% of the cases had caesarean section deliveries. 57.1% required ICU admissions and maternal mortality rate was 8.6%. Foetal outcome was satisfactory in 57.1% and 25.7% were stillbirths.

Conclusion: Atonic PPH followed by Abnormal placentation were evident as the leading causes of uncontrollable haemorrhage. This is possibly in view of a continual improvement in the management of uterine atony, reduced incidence of uterine rupture, and importantly, a rising trend of caesarean section delivery. This calls for more thoughtful approach, regarding decisions for caesarean section delivery in obstetrics practice.

KEYWORDS

Obstetric hysterectomy, atony, PPH, abnormal placentation

Introduction

Emergency obstetric hysterectomy is defined as extirpation of the uterus either at the time of caesarean section or following vaginal delivery, or within the puerperium period. It is usually performed in the face of unrelenting and life-threatening obstetric haemorrhage. A near miss event is defined as a woman who nearly died but survived a complication that occurred during pregnancy, childbirth, or within 42 days of termination of pregnancy. OH can be rightly classified as a near miss event. It is important to study such events since they provide an insight into the standard of care provided and help to reduce maternal morbidity and mortality.

The main causes of the uncontrollable haemorrhage necessitating an EPH have changed since the 1980s.¹ Uterine atony and rupture have been overtaken by abnormal placentation in many studies. This is not only because of improved conservative management of uterine atony and a reduced incidence of uterine rupture due to the extensive use of the lower uterine segment incision in preference to the upper uterine segment incision for caesarean section (CS), but also because of an actual increase in the incidence of the morbidly adherent placenta. Abnormal placentation, which refers to both placenta previa and the morbidly adherent placenta, is thought to be increasing because of the rising rate of LSCS. Other factors that have been associated with OH include advanced maternal age, multiparity, multiple gestations, and gestational diabetes.^{2,3,4,5,6}

With advent of medical and surgical methods to control complications of labour like use of uterotonics, stepwise devascularisation procedure, B-lynch etc. Peripartum hysterectomy is usually reserved for situation where above mentioned conservative measures fail to help in improving the deteriorating condition of the mother. Thus emergency obstetric hysterectomy remains the last resort in saving maternal life in critical circumstances at the cost of woman's future fertility.

This study cases of peripartum hysterectomy in our hospitals over a period of 7 years period. It attempts to investigate risk factors, common indication associated complications morbidity, mortality and outcome of cases undergoing peripartum hysterectomy. The factors responsible

for higher incidence of obstetric hysterectomy in the developing countries are poverty, poor transportation facilities, erroneous cultural and religious beliefs, high incidence of unbooked pregnancies and poorly supervised deliveries.⁷

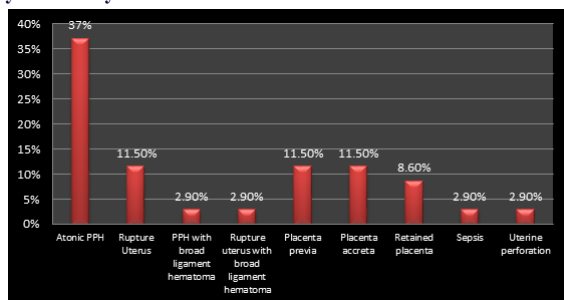
Though peripartum hysterectomy is a life saving procedure in obstetric emergencies it represents a painful dilemma to the obstetrician at the time of decision making. The decision to perform this operation especially in primigravida or in patients with no living children remains difficult one. However in the event of deteriorating vitals OH remains a potentially life saving measure. We aim to evaluate the incidence, indication, and foetomaternal complication associated with emergency obstetric hysterectomy in a tertiary care centre.

Methods

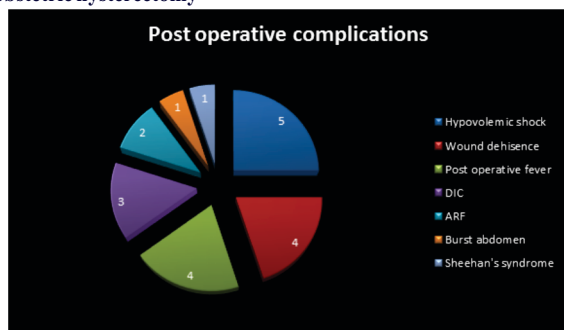
This is an observational study, conducted as a retrospective analysis of patient-records over a period of 7 years, spanning from June 2011 till June 2018 in a tertiary care centre. Records of all the patients, who underwent obstetric hysterectomies within this period, were reviewed. Cases of OH were analyzed for information regarding the maternal age, parity, gestational age, mode of delivery, indications for OH, and outcomes of the procedure including intraoperative complications, duration of hospital stay, amount of blood transfusions required, admission to intensive care unit, peripartum maternal and foetal morbidity, and mortality. The frequency of OH was reported as an incidence per 1000 deliveries. Other details were reported in numbers and in percentages.

Results

During the study period, out of 38466 deliveries, 35 cases of emergency peripartum hysterectomy were reported. Majority of cases were in the age group of 26-30 yrs. 31 cases were multigravida and only 4 cases were primigravidae. Of the 35 OH cases, 9 cases were registered at the institute, whereas 26 cases were referred from elsewhere. Out of 35 cases 20 cases were delivered by LSCS whereas 15 cases delivered vaginally out of which 5 were VBAC. The most common indication for LSCS was placenta praevia. Most common indication was atonic PPH 13 cases followed by abnormal placentation in 11 cases.

Figure1. Distribution as per Indications for Obstetric hysterectomy

Internal iliac ligation was done in 4 cases and uterine artery embolisation was done in 1 case. Intra-operative complications were noted in 4 cases in the form of bladder injury 3 cases and 1 bowel injury case. Relaparotomy was done in 1 case for burst abdomen. The 3 most common post-operative complication was hypovolaemic shock i.e 5 cases, 4 cases had sepsis, 3 cases had disseminated intravascular coagulation.

Figure2. Distribution as per Postoperative complications of obstetric hysterectomy

Almost all patients required blood transfusions and there were 20 patients who required ICU care.

The outcomes of the study have been summarised in the table 1

Outcomes	No of cases(%)
Maternal outcome	
Intensive care (total)	30(85.7%)
ICU admissions	20(57.1%)
Ventilatory support	7(21.9%)
Blood and blood product transfusions	35(100%)
Maternal mortality	3(8.6%)
Foetal outcome	
Alive and well	20(57.1%)
NICU	16(45.7%)
Still births	9(25.7%)
Neonatal deaths	3(8.6%)

Discussion

The incidence of OH is reported to vary from 0.24 to 8.9 per 1000 deliveries, as per a systematic review by Machado LSM et al.⁹ In another review of OH risk in high income countries, the median incidence rate of OH was observed to be 0.61 per 1000 deliveries, with a trend of increasing rate over time.⁸ Amongst the recently published studies from India, the reported incidence rates range from 0.83 to 3.9 per 1000 deliveries.^{10,11,12,13,14} The observations from our study are consistent with these findings, and suggest a relatively fair incidence rate. Of note, only a third of the cases were registered at the institute, the remaining being referred from other centres. Although this contributes to the heterogeneity of the study population, this also represents the true national picture of a government setup more closely.²⁶

In our study, the majority of patients undergoing OH had a history of multiparity. Multiparity is a known independent risk-factor for postpartum hemorrhage.⁹ Most common indication for OH was atonic PPH in our study which was similar to other studies as reported by Mcknight i.e 47 % and followed by abnormal placentation which was

similar to study reported by Praneshwari Devi et al i.e 26.9 %.

The finding was regarding the presence of a previous history of LSCS, in over two-thirds of the cases. The trend of increasing caesarean section deliveries, contributes to the increased risk of abnormal placentation.¹⁰ It is known from multiple studies, that caesarean section is associated with an increased risk of OH.^{16,17,18,19,20,21,22,23} This was confirmed by a recent systematic review from de la Cruz et al.⁸ The authors identified that Caesarean section, either as a previous history or as the current mode of delivery, was strongly and consistently associated with an increased risk of OH.⁸ Stanco et al. reported that 43.4% of their emergency hysterectomies were done because of uterine atony, while 33.9% were due to placenta previa with accreta.²⁴ A study from the same institution in 1993 stated that their primary indication was placenta accreta, the problem in 45% of cases, followed by uterine atony, with 20%. Baskett reported that the main indications for hysterectomy were abnormal placentation (50%) and atonic postpartum hemorrhage (32.8%).²⁵ In our study, the mode of delivery for the current pregnancy was caesarean section, in the majority of the cases. Moreover, the risk of Emergency OH tends to increase with each successive Caesarean section delivery.²⁰ These findings have significant practice-related implications, and merit a heightened awareness of these unwarranted major complications, amongst the obstetrician fraternity. Ensuring a sound judgment in opting for a caesarean section, and timely diagnosis and management of abnormal placentation, could help address this otherwise difficult complication to some extent.

OH is associated with a high rate of complications. The need for blood transfusion, injury of the urinary tract, disseminated intravascular coagulopathy, or the need for re-exploration in view of uncontrolled bleeding, contribute to the increased rate of complications. In our study, the rate of complications was within the expected range. And almost all patients required blood transfusions.

In terms of outcomes, maternal mortality was observed in 8.6% of the OH cases. This frequency is consistent with the maternal mortality reported in various Indian studies (0 to 17.7%).^{10,11,12,13,14} The frequency reported from developed countries ranges from 0-16.7%, with an average rate of 3%. Still births occurred in one-fourth of the cases. Of the 35 cases, less than half of the babies were reasonably healthy, who did not require observation in the NICU. The frequency of perinatal mortality is observed to be consistently high in the Indian studies.^{10,11,12,13,14} Although this descriptive evidence may not suggest much regarding the possible improvements in our approach, it is always relevant to ensure high standards of maternal and foetal care, firstly to avoid this complication of postpartum haemorrhage as far as possible, and secondly, to ensure all possible measures for a successful salvage procedure, with minimal complications and more acceptable outcomes, compared to the current observations.

Conclusion

Obstetric hysterectomy is a lifesaving procedure and if this is achieved many more near miss cases can be salvaged. The outcome depends on timely decision, good clinical acumen and surgical expertise. Improvement in the health infrastructure and health education will go a long way in preventing such catastrophic events. Proper antenatal care, identification of high risk cases, patient counselling and referral to a tertiary care centre at an appropriate time can prevent the incidence of this disastrous event. Every obstetrician should master their skills and expertise to perform obstetric hysterectomy and thus can help in reducing the maternal morbidity and mortality.

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