RESEARCH ARTICLE

EMERGENCY PERIPARTUM HYSTERECTOMY: A ONE YEAR REVIEW AT A TERTIARY CARE HOSPITAL

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ABSTRACT

Background: Emergency Peripartum Hysterectomy (EPH) is a lifesaving surgical procedure. The higher incidence of EPH in developing countries is because of the higher prevalence of risk factors of primary postpartum haemorrhage like, multiple pregnancy, grandmultiparity, cephalo-pelvic disproportion and prolonged obstructed labor/uterine rupture, previous caesarean section. The increasing incidence of the procedure in developed countries has been attributed to the increasing caesarean section rate which predisposes to placenta previa.

Aims & Objective: To estimate the incidence, indications and complications associated with peripartum hysterectomy performed at a tertiary care hospital.

Material and Methods: The retrospective observational analytical study was conducted at the Department of Obstetrics and Gynecology, Lady Goshen hospital, Mangalore from January 2012 to December 2012. Records of all patients who had undergone peripartum hysterectomy during the study period were explored for age, parity, booking status, indication and the type of operation performed. Maternal morbidity and mortality were also recorded.

Results: During the study period there were 5497 deliveries, out of which 6 women had undergone an EPH. The incidence was 1.2/1000 deliveries. The main indication was uterine atony 4 (66.7%), followed by rupture uterus 1 (16.7%) and placenta previa with placenta accreta 1 (16.7%). Maternal complications included febrile illness (50%) and anaemia (33.3%). All women, 6 (100%) required blood transfusions, 2(33.3%) cases transferred to ICU. No maternal deaths occurred.

Conclusion: The leading indications for emergency peripartum hysterectomy in our study are uterine atony, placenta previa with placenta accreta and uterine rupture. The higher incidence of emergency peripartum hysterectomy is because of the higher prevalence of risk factors like multiparity, previous caesarean section and cesarean section in the index pregnancy. Proper antenatal care, early identification of risk factors and timely intervention by an obstetrician are necessary in preventing this disastrous event.

Key-Words: Previous Cesarean Section; Peripartum Hysterectomy; Uterine Atony; Maternal Morbidity

Introduction

Emergency peripartum hysterectomy (EPH) by definition is a lifesaving procedure performed at the time of delivery or in the immediate postpartum period in case of intractable obstetrical hemorrhage unresponsive to other measures.[1] The most common indication for emergency procedures is severe uterine hemorrhage that cannot be controlled by conservative measures. Such hemorrhage may be due to abnormal placentation (e.g., placenta accreta), uterine atony, uterine rupture, leiomyomas, coagulopathy, or laceration of a uterine vessel not treatable by more conservative measures. The relative frequency of these conditions varies among series and is dependent upon the patient population and practice patterns.[2,3]

Peripartum hysterectomy is accompanied by substantial morbidity and mortality. Compared with nonobstetric hysterectomy, the procedure is associated with increased rates of both intraoperative and postoperative complications. The mortality of peripartum hysterectomy is more than 25 times that of hysterectomy performed outside of pregnancy.[4] Recent advances in the medical and conservative management of postpartum hemorrhage have reduced the rate of and indications for EPH, while sophistication in obstetric care and blood transfusion services have improved outcomes, especially in developed countries.[5,6]

The purpose of the present study was to estimate the incidence, indications and complications associated with emergency peripartum hysterectomy in a tertiary care hospital.

Materials and Methods

This retrospective review was carried out in the Department of Obstetrics and Gynecology, Lady Goshen Hospital, Mangalore, from January 2012 to December 2012. All the patients who underwent Emergency peripartum hysterectomy were identified from the labor ward registers, operating room registers and intensive care unit registers. The case files of all patients were reviewed regarding the maternal age, parity, antenatal booking status, previous history of caesarean delivery, mode of delivery, indication for peripartum hysterectomy and its complications.

Results

During the study period of one year, a total number of 5497 deliveries were conducted at our hospital, of which 3484 were normal vaginal deliveries and 2013 were caesarean sections. Emergency peripartum hysterectomy was performed in six cases. The incidence of peripartum hysterectomy was 1.2/1000 deliveries.

Among the patients who underwent emergency hysterectomy, 5 (83.3%) cases were of Para 2 or above. A majority of cases (n=4, 66.6%) belonged to the age group of 21-25 years (Table 1). Majority of the patients, 66% were unbooked while only 33% were booked. Retrospective analysis of the records revealed that the indications for emergency hysterectomy were atonic uterus 4 (66.7%), rupture uterus 1 (16.7%) and placenta previa with placenta accreta 1 (16.7%). (Table 2).Out of the four cases who underwent EPH for atonic uterus, 1 (25%) had extension of cervical tears during instrumental delivery, 1 (25%) extension of tears laterally involving uterine vessels during cesarean section, 2 (50%) referred as abruption with intrauterine death.

Rupture uterus was seen in only one case (16.7%) of previous LSCS who underwent laparotomy followed by peripartum hysterectomy. 1 (16.7%) case of previous 2 LSCS had placenta previa with morbidly adherent placenta (Table 3). Subtotal hysterectomy was performed in 5 (83.3%) women while total abdominal hysterectomy was done only in 1 (16.7%) case. The extension of cervical tears resulted in total hysterectomy. Conservative surgery performed in 5 (83.3%) patients before proceeding to hysterectomies, 3 (50%) patients had uterine artery ligation and in 2 (33.3%), B-Lynch compression sutures were applied. All women, 6 (100%) required blood transfusions. Febrile illness was the commonest maternal morbidity (Table 4).

Table-1: Profile of the Patients Undergone Emergency Peripartum Hysterectomy

Characteristics		N	%
Age (years)	21-25	4	66.7
	26-30	1	16.7
	31-35	1	0.0
	36-40	0	0.0
Parity	1	1	16.7
	2-3	5	83.3
	4-6	0	0.0

Table-2: Indications for Emergency Peripartum Hysterectomy

Indications	N	%
Uterine atony	4	66.7
Rupture uterus	1	16.7
Placenta previa with accreta	1	66.7

Table-3: Risk Factors for Emergency Peripartum Hysterectomy

Risk Factors	N	%
Multiparity	5	83.3
Previous LSCS	2	33.3
Placenta previa	1	16.7
Abruptio placenta	2	33.3
Operative interventions (Vacuum delivery)	1	16.7
Cesarean delivery	4	66.7

Table-4: Maternal Morbidity and Mortality

Postoperative Complications	N	%
Blood transfusion	6	100.0
Febrile illness	3	50.0
Anemia	2	33.2
ICU transfer	2	33.3

Discussion

Obstetrical hysterectomy still remains a lifesaving operation. The most common indications for the obstetric hysterectomy are: placenta's pathologies; uterine atony and rupture of the uterus. Obstetrical hysterectomy is connected with high risk of complications and maternal mortality.[7]

In the present study, the incidence of emergency peripartum hysterectomy was 1.2/1000 deliveries while in the study done in Istanbul Bakirkoy Women and Children's Teaching Hospital, the incidence of emergency peripartum hysterectomy was 0.67 in 1,000 deliveries.[8] In developed

countries, the reported incidence of EPH is below 0.1% of the normal deliveries performed, while in developing countries the incidence rates are high as 1–5/1,000 deliveries performed.[9] The incidence was higher in our hospital suggesting that it is a referral hospital and majority of the patients are unbooked, and deliver outside the health facilities unsupervised or poorly supervised and are referred in a deteriorated state. Most of the these peripheral health centers are not functional 24 hours of the day, coupled with poor transportation facilities leading to delay in getting appropriate care in labor.

The most common indications for EPH in our study was atonic uterus seen in 4 (66.6%). Kant and Wadhwani in their study observed that uterine atony was the commonest indication for peripartum hysterectomy (41.46%).[10] Forna F et al concluded that uterine atony is the leading indication for emergency hysterectomy performed following cesarean and vaginal deliveries.[11]

Rupture uterus was seen in only one case (16.7%) of previous LSCS. The main indications for EPH were ruptured uterus (34.86%) and uterine atony (29.81%) in Bushra et al study.[12] 1(16.7%) case of previous 2 LSCS had placenta previa with morbidly adherent placenta (MAP). The most well known risk factors for MAP are placenta previa and previous caesarean delivery.[13,14]

Kwee A et al reported that both previous CS and CS in the index pregnancy were associated with a significant increased risk of EPH.[15] The number of previous CS was related to an increased risk of placenta accreta, from 0.19% for one previous CS to 9.1% for four or more previous CS. Although the extent of surgical management depends on the extent of the abnormal attachment, attempts to separate the placenta can result in massive hemorrhage, and a prompt decision to proceed to hysterectomy without delay enhances the likelihood of an optimal outcome.[16]

Out of 6 cases of EPH, subtotal hysterectomy was performed in 5 and total hysterectomy in only one case. Saeed et al reported that the duration of surgery was shorter but the complications were higher in total compared with subtotal hysterectomy. They concluded that subtotal hysterectomy is a reasonable alternative in emergency obstetric hysterectomy.[17]

All patients received blood transfusions. Febrile illness was the commonest maternal morbidity seen in 50% cases followed by anemia and ICU transfer. Febrile morbidity was the commonest complication of EPH in Kant and Wadhwani study (39.02%).[10]

The risk factors were multiparity, previous cesarean delivery, current cesarean birth and abnormal placentation. Similar risk factors were observed in other studies.[18] Obstetric hysterectomy is a necessary life-saving procedure. Abnormal placentation is the leading cause of emergency hysterectomy when obstetric practice is characterized by a high cesarean section rate. Therefore, every attempt should be made to reduce the cesarean section rate by performing this procedure only for valid clinical indications.[19]

Conclusion

The leading indications for emergency peripartum hysterectomy are uterine atony, placenta previa with placenta accreta and uterine rupture. The higher incidence of emergency peripartum hysterectomy is because of the higher prevalence of risk factors like multiparity, previous caesarean section, placenta praevia and current cesarean delivery. Adequately equipped antenatal care, early identification of risk factors, hospital delivery facilities and timely intervention by an obstetrician to carry out medical/conservative surgical treatments of primary postpartum hemorrhage are needed to reduce the incidence of EPH and morbidity associated with it.

References

1. Wise A, Clark V. Challenges of major obstetric hemorrhage. Best Pract Res Clin Obstet Gynaecol. 2010; 24:353-65.
2. Glaze S, Ekwalanga P, Roberts G, Lange I, Birch C, Rosengarten A, et al. Peripartum hysterectomy: 1999 to 2006. Obstet Gynecol. 2008; 111:732.
3. Bodelon C, Bernabe-Ortiz A, Schiff MA, Reed SD. Factors associated with peripartum hysterectomy. Obstet Gynecol. 2009;114:115
4. Wright JD, Devine P, Shah M, Gaddipati S, Lewin SN, Simpson LL, et al. Morbidity and mortality of peripartum hysterectomy. Obstet Gynecol. 2010; 115:1187.

5. Shellhas CS, Gilbert S, Landon MB, Verner MW, Leveno KJ, Hauth JC, et al. Eunice Kennedy Shriver National Institutes of Health and Human Development Maternal-Fetal Medicine Units Network. The frequency and complication rates of hysterectomy accompanying cesarean delivery. Obstet Gynecol. 2009; 114 (2 Pt 1):224–9.18.
6. Zwart JJ, Dijk PD, van Roosmalen J. Peripartum hysterectomy and arterial embolization for major obstetric hemorrhage: a 2-year nationwide cohort study in the Netherlands. Am J Obstet Gynecol. 2010; 202:150.
7. Rabenda-Łacka K, Wilczyński J, Radoch Z, Breborowicz GH. Obstetrical hysterectomy. Ginekol Pol. 2003;74:1521-5
8. Güngördük K, Yildirim G, Dugan N, Polat I, Sudolmus S, Ark C. Peripartum hysterectomy in Turkey: a case-control study. J Obstet Gynaecol. 2009;29(8):722-8
9. Yalinkaya A, Guzel AI, Kangal K. Emergency Peripartum Hysterectomy: 16-year Experience of a Medical Hospital. J Chin Med Assoc. 2010; 73:360-3.
10. Kant A, Wadhwani K. Emergency obstetric hysterectomy. J Obstet Gynecol India. 2005;55 (2):132-134.
11. Forna F, Miles AM, Jamieson DJ. Emergency peripartum hysterectomy: a comparison of cesarean and postpartum hysterectomy. Am J Obstet Gynecol. 2004 May; 190 (5):1440-4.
12. Khan B, Khan B, Sultana R, Bashir R, Deeba F. J Ayub Med Coll Abbottabad 2012; 24(1):14-17.
13. Cieminski A, Dlugoliecki F. Placenta previa accreta. Ginekol Pol. 2004 ;75(12):919-25.
14. Choi SJ, Song SE, Jung KL, Oh SY, Kim JH, Roh CR. Antepartum risk factors associated with peripartum cesarean hysterectomy in women with placenta previa. Am J Perinatol. 2008;25:37-41
15. Kwee A, Bots ML, Visser GH, Bruinse HW. Emergency peripartum hysterectomy: A prospective study in The Netherlands. Eur J Obstet Gynecol Reprod Biol. 2006;124(2):187-92.
16. Knight M; UKOSS. Peripartum hysterectomy in the UK: management and outcomes of the associated hemorrhage. Br J Obstet Gynaecol 2007; 114:1380-7.
17. Saeed F, Khalid R, Khan A, Masheer S, Rizvi JH. Peripartum hysterectomy: a ten-year experience at a tertiary care hospital in a developing country. Trop Doct. 2010;40(1):18-21
18. Ehtisham S. Emergency Peripartum Hysterectomy. Pak J Surg 2011; 27(4): 288-291
19. Daskalakis G, Anastasakis E, Papantoniou N, Mesogitis S, Theodora M, Antsaklis A. Emergency obstetric hysterectomy. Acta Obstet Gynecol Scand. 2007;86(2):223-7.

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