

Emergency Obstetric Hysterectomy: A Retrospective Study from A Tertiary Care Hospital Over Three Years

Majumdar Anamika¹, Desai Archish², Mallick Kallol³, Patel Shivani⁴, Gandhi Dinal⁵, Patel Dhara⁶

Abstract

Background: The study was conducted to determine the incidence, indication and fetomaternal outcome associated with emergency obstetric hysterectomy in a tertiary care centre. **Methods:** Forty-two cases of emergency obstetric hysterectomy performed during the three-year period from July 2014 to July 2017 were analysed in the Department of Gynaecology and Obstetrics at Surat Municipal Institute of Medical Education and Research, Surat. **Results:** During the study period there were 42 cases of obstetric hysterectomy out of 16221 deliveries giving an incidence of 0.25%. Majority of the patients 34 (80%) were unbooked and were in the age group of 26-30 (38%). Majority were second parapatients. Atonic postpartum haemorrhage was the most common indication contributing to 45.2% of the cases. There were six maternal deaths in the study. All were unbooked and three of them died of disseminated intravascular coagulation, two died of hypovolemic shock with cardiopulmonary arrest and one died of septicemia. Whereas there were 21.4% perinatal mortality and 19.1% NICU admissions. **Conclusions:** Emergency obstetric hysterectomy is a potentially lifesaving procedure which often puts obstetrician in dilemma at the time of decision making.

Adherent Placenta; Hypovolemic Shock; Cardiopulmonary Arrest.

Introduction

Obstetric hysterectomy was originally devised more than 200 years ago as a surgical attempt to manage life threatening obstetric haemorrhage and infection. Obstetric hysterectomy is usually the last resort in the obstetrician's armamentarium to save the life of the mother [1]. In developing countries obstetric haemorrhage is the leading cause of maternal deaths [2]. Prompt decision making and excellent surgical skills with a speedy intervention are the key component of this life saving procedure. Early resuscitation, transfusion of blood and blood components helps to improve deteriorating haemodynamic parameters and helps the patient to withstand the surgical procedure and anaesthesia. It has a definitive role in developing countries where the advanced modalities like uterine artery embolization to prevent PPH is not easily available. The decision is made when the condition of the patient is too critical.

Conservative methods like misoprostol, oxytocin drip, condom catheter balloon and no inflatable anti shock garment for the management of hypovolemic shock have all been advocated to manage obstetric haemorrhage effectively in low resource settings [3]. On the other hand, advance modalities like uterine artery embolization in intervention radiology has also been demonstrated to prevent severe PPH. But sometimes in life threatening condition emergency obstetric hysterectomy remains the main stay of management of massive haemorrhage [1,2].

¹Assistant Professor
²Associate Professor
⁴Second Year Resident,
Department of Obstetrics
and Gynaecology,
³Assistant Professor,
Department of Preventive
and Social Medicine (PSM),
Surat Municipal Institute
of Medical Education and
Research (SMIMER) Surat,
Gujarat 395101, India.

Corresponding Author:
Desai Archish,
Associate Professor,
Department of Obstetrics
and Gynecology, Surat
Municipal Institute of
Medical Education and
Research (SMIMER), Surat,
Gujarat 395101, India.
E-mail:
archishdesai75@gmail.com

Received on 20.03.2018,
Accepted on 11.04.2018

Keywords: Emergency Obstetric
Hysterectomy (EOH); Morbid

Similarly, in spite of advancement in obstetrics, dais handling of obstructed labour and its complications are quite prevalent in rural India. So to prevent massive haemorrhage in rupture uterus, many times emergency obstetric hysterectomy is considered as the definitive management. We aimed to evaluate the incidence, indication, and fetomaternal complication associated with emergency obstetric hysterectomy in a tertiary carecentre.

Methods

This was a retrospective, observational, analytic study of all parturient women required EOH over a period of 3 years from July 2014-July 2017 from the department of Gynaecology and obstetrics, Surat Municipal Institute of Medical Education and Research, Surat.

We included all the women delivered in the hospital in the mentioned period, after 28 weeks of gestation, who underwent hysterectomy at the time of delivery or subsequently within the defined period of puerperium (42 days). The women who delivered outside the hospital and were referred for obstetric complications meriting a hysterectomy and fulfilling all the above conditions were also included in the study. Women who delivered before 28 weeks of gestation, undergoing hysterectomy for indications other than obstetric or after 42 weeks of gestation were excluded from the study. The data of the incidence, indication and fetomaternal complications were collected and analysed from the hospital medical records.

Results

There were 42 cases of emergency obstetric hysterectomy amongst 16221 deliveries over a period of 3 year giving the incidence of 0.25%,of which vaginal deliveries were 11104 and LSCS were5117. 0.14% were in cases of vaginal delivery and 0.51% were in cases of LSCS for various indications (Table 1 shows the reported incidences).

Majority of the patients were in the age group of 26-30 (38%)and were of second parity (Table 2). Atonic postpartum haemorrhage was the most common indication for EOH accounting for 45.2% of the cases (19/42). Second most common indicationwas morbidly adherent placenta which was presented in 8 among 42 subjects (19.1%) Third indication,was placenta Previa seen in 6 patients

(14.3%). Among 6 cases 5 had more than one factor i.e. previous LSCS with placenta Previa and 1 had only placenta Previa.Uterine rupture 5 (11.9%), Abruption placenta 3(7.2%) and Traumatic postpartum haemorrhage 1 (2.4%) were the other causes (Table 3).

Blood loss and blood transfusion - The average blood loss was in the range of 2to3 litres. All patients underwent replacement therapy with blood and component transfusion.

As far as fetomaternal complications are concerned there were six maternal mortalities. All of them were unbooked. The cause of death in 3 patients were Disseminated intravascular coagulation, in two were hypovolemic shock with cardiopulmonary arrest whereas 1 died of septicaemia where hysterectomy was done for atonic PPH. 19 (45.2%) patients developed septicaemia, 7 (16.6%)had consumption coagulopathy, 3 patients (7.2%) had acute renal failure, 2 (4.8%) had intra operative bladder injury which was repaired at the same time. There were 9 (21.4%) perinatal mortality and 8 (19.1%) NICU admissions (Table 4).

Discussion

First caesarean hysterectomy was performed by

Table 1: Incidence of emergency obstetric hysterectomy (EOH)

Statistical data	Numbers
Numbers of deliveries	16221
Number of LSCS	5117
Number of EOH	42
Incidence of EOH	0.25%

Table 2: Distribution of cases by age and parity

Age	Primi para	Second para	Multipara	Total
20-25	4	8	1	13
26-30	2	11	3	16
31-35	0	3	7	10
35-40	0	2	1	3
Total	6	24	12	42

Table 3: Incidence rate according to indications

Indications	Number of cases	Incidence %
Atonic postpartum haemorrhage	19	45.2
Traumatic postpartum haemorrhage	01	2.4
Morbidly adherent placenta	08	19.1
Uterine rupture	05	11.9
Abruption placenta	03	7.2
Placenta Previa	06	14.3
Total	42	100

Table 4: Fetomaternal complications

Complications	Numbers	Incidence %
Maternal		
Septicaemia	19	45.2
Coagulopathy	07	16.6
Acute renal failure	03	7.2
Need for vasopressin	31	73
Bladder repair	02	4.8
Relaparotomy	03	7.14
Mortality	06	14.3
Fetal		
NICU admission	08	19.1
Mortality	09	21.4

Storer in United States in 1869. Despite regular availability of contraceptives and abortion services and reduced family size world over, there has been consistent rise in the rates of caesarean attributable in the part, to the patient preferences and medico legal implications on medical fraternity. In addition to it advances in anaesthesia, intensive care backup, availability of blood bank has made it a safer and painless alternative to labour. This has not only given rise to complications like abnormal placentation and uterine rupture, but also the incidence of PPH, giving obstetric hysterectomy more relevance in present day modern obstetric practice. Prompt decision and good surgical skills are the two factors related with surgeon's acumen that affect the maternal outcome.

In our study the incidence of Obstetric hysterectomy was 0.25%. The incidence was in the same range as reported by Kant et al [4]. The primary reason for this incidence is due to the fact that our institution is a tertiary referral centre and receive patients from periphery. The most common indication of EOH in our study was uterine atony (45.2%) followed by morbidly adherent placenta (19.1%) and Placenta Previa (14.3%). This reflects the situation in most developing countries where atony accounts for the majority of cases of EOH, but also shows a rising contribution of placental causes, which is replicating the trend in the developed world. Studies from other tertiary care centres in India [7] also revealed atonic postpartum haemorrhage to be the most common indication for EOH.

A very important observation was the prominent association of prior caesarean delivery with the three major indications of EOH. History of prior caesarean section was associated with atony in 41.6% of cases, with morbidly adherent placenta in 81% of cases, and with Placenta Previa in 56% of cases [5]. It may be prudent to emphasize here that morbidly adherent

placenta was associated with a previous caesarean section in 36% of cases and with two previous caesareans in 45% of cases.

Bateman et al. [6] also found that the rate of EOH for atony increased four-fold following repeat caesarean section, 2.5-fold following primary caesarean section, and 1.5-fold following primary vaginal delivery over a period of 14 years. There, in fact, seems much to be gained from reducing the primary caesarean rate in obstetric practice. In our case, morbidly adherent placenta was the second most common indication for EOH. This was also found in other tertiary care centres in India [7] contributing to 40% of the cases.

Third most common indication in our study was placenta previa (14.3%). This is similar to the study of Allahbadiya and Vadiya [7].

As far as complications are concerned (Table 5), in our study approximately 25 (60%) parturient and 8 (19.1%) neonates went into ICU. All of them were unbooked and half of the patients needed ICU care. Barring the need for vasopressor (73%), septicemia was the most common complication in our study and others [8]. 7 (16.6%) patients landed in DIC which is close to the study of Jaya chawla where 12% had coagulopathy [9]. Only 3 (7.14%) patients had re laparotomy in our study to arrest hemorrhage where as in the study of Jaya 3.6% patients had re laparotomy.

There are 6 (14.33%) mortality in our study, where 2 patients died of DIC, 2 patients died of hemorrhagic shock with ARF, one of DIC with cardiopulmonary arrest and one of septicemia. All of them were unbooked and reached hospital in a state of shock, while 10% of maternal deaths were reported by other [10]. Ours was high as being a referral institute and receiving patients from periphery.

Conclusion

Emergency obstetric hysterectomy is a necessary evil in obstetrics. This is a situation when surgeon is in dilemma as in one hand it curtails the future child bearing potential of the woman, on the other hand save the mother in life threatening condition. Most of the morbidity is attributable to its indication and underlying disorder rather than the procedure itself. The incidence of its surgery can be checked by good antenatal care, active management of labour, early recognition of complications and only indicated performance of caesarean sections as the irony is in one hand timely caesarean section in case of obstructed labour can prevent rupture uterus, which otherwise requires obstetric hysterectomy where as in other hand unnecessary caesarean section in a primi gravida can lead to morbidly adherent placenta, which also requires obstetric hysterectomy.

Reference

1. Najam R, Bansal P, Sharma R, Agrawal D. Emergency Obstetric Hysterectomy: A retrospective study at a tertiary care hospital. *Journal of Clinical and Diagnostic Research* 2010;4:2864-2868.
2. Anita K, Kavita WW. Emergency obstetric hysterectomy. *J Obstet Gynecol India* 2005 MarApr;55(2):132-4.
3. Miller S, Lester F, Hensleigh P. Prevention and treatment of postpartum hemorrhage: new advances for low- resource settings. *J Midwifery Womens Health*. 2004;49(4):283-92.
4. Varghese S, Gokulam N, Al- Abri S. Uterine Artery Embolization in Postpartum Hemorrhage: A Case Report. *Oman Med J*. 2012 Jul;27(2).
5. Juneja SK, Tandon P, Mohan B, Kaushal S. A change in the management of intractable obstetrical hemorrhage over 15 years in a tertiary care center. *Int J Appl Basic Med Res* 2014. Sep;4(Suppl 1):S17-S19.
6. Bateman BT, Mhyre JM, Callaghan WM, Kuklina EV. Peripartum hysterectomy in the United States: nationwide 14 year experience. *Am J Obstet Gynecol* 2012 Jan;206(1):63.e1-63.
7. Allahbadiya GV, Vaidya P. Obstetric Hysterectomy (A review of 50 cases from January 1987 to august 1990) *J Obstet Gynaecol Ind*. 1991;41:634-7.
8. Pradhan M, Yong S. Emergency Peripartum Hysterectomy as Postpartum Hemorrhage Treatment: Incidence, Risk factors, and Complications. *Journal of Nepal Medical Association*. 2014;52(193):668-76.
9. Chawla J, Arora D. Emergency obstetric hysterectomy: A retrospective study from a teaching hospital in North India over eight years. *Oman medical journal*. 2015;30(3):181-6.
10. Sheiner E, Levy A, Katz M. Identifying risk factors for peripartum caeseraen hysterectomy. A population based study. *J Reprod Med*. 2003;48:622-6.