International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Verma M et al. Int J Reprod Contracept Obstet Gynecol. 2018 Mar;7(3):841-844
www.ijrcog.org

pISSN 2320-1770 | eISSN 2320-1789

DOI: http://dx.doi.org/10.18203/2320-1770.ijrcog20180451

Original Research Article

Emergency obstetric hysterectomy: a retrospective study from a teaching hospital over eight years

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Received: 31 December 2017
Revised: 30 January 2018
Accepted: 02 February 2018

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ABSTRACT

Background: EOH is define as removal of uterus (total or subtotal) at the time of caesarean section or following vaginal delivery within puerperium. Objective of present study was to determine the frequency, demographic characteristics, indications, and maternal outcomes associated with emergency obstetric hysterectomy.
Methods: It was a retrospective, observational, and analytical study conducted over a period of eight years, from January 2009 to December 2016. A total of 64 cases of emergency obstetric hysterectomy (EOH) were studied in the Department of Obstetrics and Gynecology, SRG Hospital and Jhalawar Medical College Jhalawar (Rajasthan).
Results: The incidence of EOH in our study was 0.4 per 1000 following vaginal delivery and 3.5 per 1000 following cesarean section. The overall incidence was 1.03 per 1000 deliveries. Rupture uterus 30 (46.8%) was the most common indication followed by postpartum hemorrhage 23 (35.9%) and morbidly adherent placenta 11 (17.1%). Subtotal abdominal hysterectomy was performed in most of the cases. Maternal mortality was 6.2%.
Conclusions: This study concluded the great role of EOH as a life-saving procedure in those cases where medical management has failed.

Keywords: Emergency obstetric hysterectomy, Post-partum hemorrhage, Rupture uterus

INTRODUCTION

EOH is define as removal of uterus (total or subtotal) at the time of caesarean section or following vaginal delivery within puerperium.

EOH is the most dramatic operation in modern obstetrics and is generally performed when there is life threatening hemorrhage not responding to medical management or conservative surgical procedures.[1-3]

Severe postpartum hemorrhage was reported to occur in 6.7/1000 deliveries world wide.[4] It is one of the leading cause of maternal mortality and morbidity and represent the most challenging complication that an obstetrician will face.[5]

Emergency obstetrics hysterectomy is easy and life saving procedure. But it needs of learning skills. Decision of emergency obstetrica hysterectomy should be taken in uncontrolled hemorrhage.

Peripartum hysterectomy is removal of uterus at time of cesarean section or following vaginal delivery. In modern obstetrics the overall incidence of hysterectomy is 0.05% but there is considerable difference in different part of word.

METHODS

This is an observational study conducted in the Department of Obstetrics and Gynecology Jhalawar medical college and Hospital Jhalawar Rajasthan between January 2009 to December 2016.

Inclusion criteria

Inclusion criteria included all women who underwent hysterectomy for obstetric indications at the time of delivery and cesarean or subsequently within the defined period of puerperium after 36 weeks of gestation.

Women who delivered before 36 weeks of gestation, undergoing hysterectomy for indications other than obstetric, or outside the stipulated time of 42 days post delivery were excluded from the study.

After collecting relevant data from the operation theatre records, each patients case record was scrutinized with regard to incidence, age, parity, antenatal high risk factors, indications, hysterectomy type, and complications, along with the ultimate maternal outcome. Institutional ethical committee approval was obtained for the study. Information about total number of deliveries and of caesarean during the study period was obtained from the medical record department.

RESULTS

Out of 61961 deliveries the incidence of emergency obstetric hysterectomies in present study was 0.04% following vaginal deliveries and 0.35% following caesarean section. The overall incidence was 0.10% (1.03 per 1000 deliveries). Table 1 shows the association of caesarean section with EOH. The caesarean section rate during the study period was 18.29%.

Table 1: Incidence of emergency obstetric hysterectomies (EOH) following vaginal delivery and caesarean section.

Mode of delivery	Number of patient	EOH	Incidence
Normal vaginal deliveries	50625	24	0.04%
Ceserean section	11336	40	0.35%
Total	61961	64	0.10%

Age and parity distribution of study group is showed in Table 2 Youngest women to undergo the procedure was 20 years and the oldest was 38 years.

The commonest age group in our study period was 26-30years 23 (35.9%) and19(29.6%) cases was in the age group of 31-35year. Parity distribution showed that 24 (37.5%) of patient were para 3 (most common), 16 (25%) were para 2.

Table 2: Age and parity distribution.

Age	P_1	P_2	P_3	P_4	P_5 or more	Total
20-25	7	6	2	0	0	15
26-30	4	8	11	0	0	23
31-35	1	4	6	4	4	19
36-40	0	0	3	2	2	7
	12	16	24	6	6	64

Table 3 shows the indication of EOH. The most common indication of EOH was Rupture uterus 30 (46.8%) in which 15 (23.4%) was due to rupture of previous caesarean scar, 9 (14.0%) due to obstructed labour and 6 (9.3%) cases was due to rupture in grand multipara. The second most common indication was postpartum hemorrage 23 (35.9%). Out of which 10 (15.6%) was due to atonic uterus, 6 (9.3%) was due to traumatic pph.

Table 3: Indications for EOH.

Indications	Number	Percentage
Rupture uterus	30	46.8
Rupture of caesarean scar	15	23.4
Obstructed labour	9	14.0
Grandmultipara	6	9.3
PPH	23	35.9
Atonic	10	15.6
Traumatic	6	9.3
Abruptio placenta	4	6.2
Placenta praevia	3	4.6
Morbid adherent placenta	11	17.1
Previous caesarean	8	12.5
Placenta previa	2	3.1
Prior curratage	1	1.5

The third indication was Morbid adherent placenta 11 (17.1%), morbid adherent placenta most commonly seen in previous caesarean section 8 (12.5%).

Table 4: Maternal complications.

Complications	No. of patient	Percentage
Fever	24	37.5
Wound sepsis	9	14
Renal failure	8	12.5
Mortality	4	6.2
DIC	4	6.2
Septicemia	3	4.6
Shock	3	4.6

Table 4 shows the complications associated with the EOH. The most common complication was post operative fever which was present in 24 (37.5%) cases and other were wound sepsis 9 (14.0%), prolonged labour, antepartum hemorrhage, anemia, obstructed labour, intrauterine manipulation probably accounts for these complications. Other complications are renal failure 8 (12.5%), maternal mortality 4 (6.2%), DIC 4 (6.2%), septicaemia 3 (4.6%) and shock 3 (4.6%) cases.

Total maternal mortality was 4 (6.2%), 0.62 per 1000 deliveries in present study. These were due to DIC in two, septicemia in one and one was due to renal failure.

Blood and blood products transfusion was done in all cases in the range of two to ten unit average of five units.

The mean of hospital stay was <10 days in 26 (40.6%) and >10 days in 38 (59.3%)

64 cases of EOH studied, 46 patients (71.8%) delivered in our institution where as 18 (39.1%) of patient delivered outside the hospital and were later referred for further management

Subtotal hysterectomy was the most commonly 58 (90.6%) performed surgical procedure in our study only in 6 (9.3%) total abdominal hysterectomy done in case of morbid adherent placenta and placenta previa. STH appears to be the procedure of choice because in a desperate situation with excessive bleeding STH is commonly performed as it is technically easier, requires a shorter operative time, and has less blood loss and fewer post-operative complications.

DISCUSSION

During the 8 years study period there were a total number of 61,961 deliveries in our institution out of which 50,625 (81.7%) were vaginal deliveries, and 11,336 (18.29%) were caesarean deliveries.

64 women underwent EOH during this study period. The overall incidence was 1.03 per 1000 deliveries (0.1%). It is considerably lower than that reported in Columbia (0.8%) Nigeria (0.51%) and similar to China (0.22%) and Pakistan (0.27%).[6-9]

In the developed countries American and Europe where the incidence of EOH is approximately one in 2000 deliveries.[10]

The rate of EOH was 3.5 per 1000 caesarean deliveries and 0.4 per 1000 vaginal deliveries. The caesarean section rate in the study period was 18.29%. 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 centre in surroundings rural area.

Majority of the patient was unbooked 58 (90%) only the 6 (10%) were booked cases.

The most common indication for peripartum hysterectomy in this study was uterine rupture (46.8%) this is similar to findings from other centres in Nigeria, and other developing countries but varies from developed countries where abnormal placentation and uterine atony, where as in developing countries, rupture of uterus was the most frequent indication.[11-16]

Present study was similar to the study done by Korejo et al from Pakistan recently reported that 47.1% of cases were the result of uterine rupture, 28.9% from PPH due to uterine atony and 17.4 % from placental causes.[9]

Lack of health information, illiteracy, poor antenatal care, poverty, home delivery by birth attendant, delay in referrals all contribute to uterine rupture. Injudicious use of oxytocin and trial of labour along with prolonged obstructured labour was the common cause.

Out of 64 cases uterine packing was done in 22 (34.3%) cases, B-lynch suture were applied in 18 (28.4%) cases, stepwise devascularization of uterus was done in 12 (18.7%) and cervical, vaginal, paraurethral tear were stitched in 15 (23.4%)cases before EOH. Multiple methods were applied in most of the cases before taking decision for EOH.

Total maternal mortality was 4 (6.2%), 0.62 per1000 deliveries in our study. These were due to DIC in two, septicemia in one and one was due to renal failure.

Machado reviewed international literature over the last two decades on EOH and found that incidence ranged from 0.24 to 8.7 per 1000 deliveries. Incidence was reported to be 0.3 in the Netherlands, 0.2 in Norway, 0.3 in Ireland, 0.5 in Israel, 0.6 in Saudi Arabia and 1.2 to 2.7 per 1000 deliveries in the United states of America. Mortality ranged from 0 to 12.5% with a mean of 4.8%.[17]

CONCLUSION

This study concluded the great role of EOH as a life saving procedure in those cases where medical management has failed.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Verma M, Agarwal M. Emergency obstetric hysterectomy: a retrospective study from a teaching hospital over eight years. Int J Reprod Contracept Obstet Gynecol 2018;7:841-4.