ASIAN JOURNAL OF PHARMACEUTICAL AND CLINICAL RESEARCH

INNOVARE ACADEMIC SCIENCES
Knowledge to Innovation

Vol 15, Issue 9, 2022

Online - 2455-3891
Print - 0974-2441

Research Article

EMERGENCY OBSTETRIC HYSTERECTOMY: A RETROSPECTIVE STUDY FROM A TEACHING HOSPITAL OVER THREE YEARS

MONIKA RAHAR[1]*, MANJU AGARWAL[1], ANJLINA BHATI[1], SURENDRA SINGH[2], AISHWARYA RAVIKRISHAN[2]

[1]Department of Obstetrics and Gynaecology, Jhalawar Medical College, Jhalawar, Rajasthan, India. [2]Department of General Medicine, Jhalawar Medical College Jhalawar, Data Analysis, Jhalawar, Rajasthan, India. Email: monikarahar5@gmail.com

Received: 29 May 2022, Revised and Accepted: 01 July 2022

ABSTRACT

Objectives: Objective of the present study to evaluate the incidence, indications, and complications associated with emergency obstetric hysterectomy.

Methods: This is a retrospective observational study was conducted in Smt. Hira Kunwar Ba Mahila Hospital, Jhalawar attached to Jhalawar medical college between January 2018 and April 2021, and who had and Emergency obstetric hysterectomy during the same admission, were identified from the hospital database.

Results: The incidence of emergency obstetric hysterectomy in our study 0.2/1000 deliveries following vaginal deliveries and 0.9/1000 deliveries following caesarean deliveries. The overall incidence was 0.4/1000 deliveries. Rupture uterus 5 (38.5%) was the most common indications followed by postpartum hemorrhage 4 (30.8%) and morbidly adherent placenta 4 (30.8%).

Conclusions: Emergency obstetric hysterectomy is a lifesaving procedure in those cases where medical management has failed.

Keywords: Emergency obstetric hysterectomy, Normal vaginal delivery, Caesarean delivery.

 DOI: http://dx.doi.org/10.22159/ajpcr.2022v15i9.45369. Journal homepage: https://innovareacademics.in/journals/index.php/ajpcr

INTRODUCTION

Emergency obstetric hysterectomy in obstetric practice was first proposed in 1869, with no desirable results. It was followed 7 years later by a successful operation, the first cesarean subtotal hysterectomy in which case mother and infant survived [1]. It includes both cesarean hysterectomies that are performed after caesarean delivery and postpartum hysterectomy performed after vaginal delivery. Postpartum hemorrhage is an important and dangerous complication after delivery. 1 in 100,000 women in countries with high medical standards and 1 in 1,000 women in developing countries die after childbirth due to bleeding complications [2].

The incidence of emergency postpartum hysterectomy and caesarean hysterectomy varies in different countries from 1 in 1420 deliveries in Australia [1] to 1 in 348 deliveries in Nigeria [3]. Incidence of emergency obstetric hysterectomy 0.24/1000 in Denmark as reported by Sakse *et al*. [4] and 0.36/1000 in United Kingdom as reported by Smith *et al*. [5].

The indications for the hysterectomy are placenta praevia, secondary postpartum hemorrhage, abruptio placentae, atonic postpartum hemorrhage, placenta accreta, traumatic postpartum hemorrhage, broad ligament hematoma, and others.

METHODS

This is a retrospective observational study was conducted in Smt. Hira Kunwar Ba Mahila Hospital, Jhalawar attached to Jhalawar medical college between January 2018 and April 2021, and who had an Emergency obstetric hysterectomy during the same admission, were identified from the hospital database. Data were abstracted from individual admission file from medical record department. After collecting data from the operation theatre records, each patient case record was scrutinized with regard to incidence, age, parity, antenatal high-risk factors, indications, hysterectomy type, and complications along with maternal outcome. In all cases, the decision and the performance of the procedure were undertaken by two to three consultant obstetricians. Every one of them had obstetric experience of more than 10 years. Elective surgery was performed for other purpose such as myoma, malignancy was excluded from the study.

RESULTS

Out of 23326 deliveries the incidence of emergency obstetric hysterectomy in present study was 0.02% following vaginal deliveries and 0.09% following cesarean section. The overall incidence was 0.04% (0.4/1000 deliveries). Table 1 shows incidence of emergency obstetric hysterectomy following vaginal delivery and cesarean section.

Table 2 shows the indication of emergency obstetric hysterectomy. The most common indication of emergency hysterectomy was rupture uterus present in 5 (38.5%) cases, in which 3 (23.1%) cases were due to rupture of previous caesarean scar, 1 (7.7%) case was due to obstructed labor and 1 (7.7%) case was due to rupture of uterus in grand multipara. In our study, postpartum hemorrhage was present in 4 (30.86%) cases, in which 2 (15.38%) cases were due to atonic uterus, 1 (7.7%) case was due to traumatic PPH, and 1 (7.7%) case was due to placenta previa. Third common indication was morbid adherent placenta in 4 (30.8%) cases, in which previous cesarean section and placenta previa were in 2 (15.38%) cases and prior curettage 1 (7.7%) case.

Table 3 shows the complications associated with the emergency obstetric hysterectomy. The most common complication febrile illness which was present in 5 (38.5%) cases and second common complication wound sepsis 4 (30.76%) and other complications are renal injury 2 (15.4%), disseminated intravascular coagulation 1 (7.7%), septicemia 1 (7.7%), and shock 1 (7.7%) cases. There was no maternal death in our study.

DISCUSSION

During the study period, there were a total number of 33124 deliveries in our institution out of which 23326 (70.4%) were vaginal deliveries and 9778 (29.6%) were caesarean deliveries.

Table 1: Incidence of emergency obstetric hysterectomy

Mode of delivery	Number of patients	Emergency obstetric hysterectomy	Incidence
Vaginal deliveries	23326	4	0.02%
Cesarean sections	9798	9	0.09%
Total	33124	13	0.04%

Table 2: Indications for emergency obstetric hysterectomy

Indication of emergency obstetric hysterectomy	No of patients (n=13)	Percentage
Rupture Uterus	5	38.5
Rupture of cesarean scar	3	23.1
Obstructed labor	1	7.7
Grand multipara	1	7.7
Postpartum Hemorrhage	4	30.86
Atonic	2	15.38
Traumatic	1	7.7
Placenta Previa	1	7.7
Morbid Adherent Placenta	4	30.8
Previous cesarean and placenta previa	2	15.38
Prior curettage	1	7.7

Table 3: Maternal complications

Complications	No of patients	Percentage
Renal injury	2	15.4
DIC	1	7.7
Febrile illness	5	38.5
Septicemia	1	7.7
Wound sepsis	4	30.76
Shock	1	7.7

13 women underwent emergency obstetric hysterectomy during this study period. The overall incidence was 0.4/1000 deliveries (0.04%) in our study which is also comparable to reported by 0.4/1000 in New Zealand [6] and East Africa [7], 0.48/1000 in Israel [8], and Great Britain [9] to 1.74/1000 in the USA [10].

The rate of emergency obstetric hysterectomy was 0.2/1000 vaginal deliveries and 0.9/1000 caesarean hysterectomy. The caesarean section rate in the study period was 29.6%. The primary reason for this higher incidence is due to the fact that our hospital is a referral center to most of the primary health care center in surroundings rural area.

The most common indication of emergency hysterectomy was rupture uterus 5 (38.5%), in which 3 (23.1%) due to rupture of previous caesarean scar, 1 (7.7%) due to obstructed labor and 1 (7.7%) case due to rupture of uterus in grand multipara. The incidence is similar to finding from other centers in Nigeria [11].

Second most common indication of obstetric hysterectomy in our study is postpartum haemorrhage 4(30.86%), in which 2(15.38%) due to atonic uterus, 1(7.7%) due to traumatic PPH and 1(7.7%) due to placenta previa. The incidence of uterine atony decreased due to wide use of preventive medical and surgical approaches (uterotonics, Bakri-balloon, and BLynch/Hayman suture) and an increase in antenatal care. Other factors that led to a decrease in atony-related hysterectomies include the emergency obstetric care education given to all obstetricians by the government and the coordinated care for hemorrhagic incidents at highly experienced maternity centers.

Third common indication was morbid adherent placenta 4 (30.8%), previous caesarean section and placenta previa 2 (15.38%), and prior curettage 1 (7.7%). The risk of morbidly adherent placentation increases proportionally with the number of cesarean deliveries or curettages [12].

The most common complication febrile illness which was present in 5 (38.5%) cases and wound sepsis 4 (30.76%), prolonged labor, antepartum hemorrhage, anemia, obstructed labor, and intrauterine manipulation for placenta removal probably accounts for these complications. Other complications are renal injury 2 (15.4%), disseminated intravascular coagulation 1 (7.7%), septicemia 1 (7.7%), and shock 1 (7.7%) cases. Complications from emergency obstetric hysterectomy are high because of the increased blood supply to the pelvic organs during pregnancy, the pelvic anatomy is also distorted because of the enlarged uterus, and the pelvic tissues are fragile [13]. Blood transfusion was the most common adjunct therapy. However, this also increases the risk of blood transmitted diseases such as hepatitis or HIV [14]. According to Singh *et al.*, complication in emergency obstetric hysterectomy was fever of unspecified origin 22.2%, wound infection 11.1%, fluid overload 11.1%, ascites 11.1%, peritonitis 11.1%, intraperitoneal hemorrhage 11.1%, bladder injury 11.1%, and VVF 11.1% [15].

CONCLUSIONS

Emergency postpartum hysterectomy is a lifesaving procedure which although is associated with substantial morbidity necessary in case of severe hemorrhage not responding to any alternative methods, rupture uterus, and morbid adherent placenta. Timely decision and intervention may mean life and death to the patient and minimize morbidity.

Based on the findings of this retrospective study, a primary objective to improve maternal care should be to decrease the caesarean section rate and women at high risk of postpartum hysterectomy should be identified using by better diagnostics modalities, provided antenatal management, and delivered in highly experienced maternity centers that have coordinated care team.

CONFLICT OF INTEREST

All authors declare that they have no conflicts of interest.

AUTHORS FUNDING

None.

REFERENCES

1. Hill DJ, Beischer NA. Hysterectomy in obstetric practice. Aust N Z J Obstet Gynaecol 1980;20:151-3. doi: 10.1111/j.1479-828x.1980.tb02895.x, PMID 6257222.
2. Mousa HA, Walkinshaw S. Major postpartum haemorrhage. Curr Opin Obstet Gynecol 2001;13:595-603. doi: 10.1097/00001703-200112000-00008, PMID 11707663.
3. Osefo NJ. Caesarean and postpartum hysterectomy in Enugu, 19731986. Int J Gynecol Obstet 1989;30:93-7. doi: 10.1016/0020-7292(89)90301-9.
4. Sakse A, Weber T, Nickelsen C, Secher NJ. Peripartum hysterectomy in Denmark 1995-2004. Acta Obstet Gynecol Scand 2007;86:1472-5. doi: 10.1080/00016340701692651, PMID 18027114.
5. Smith J, Mousa HA. Peripartum hysterectomy for primary postpartum haemorrhage: Incidence and maternal morbidity. J Obstet Gynaecol 2007;27:44-7. doi: 10.1080/01443610601016925, PMID 17365458.
6. Wong TY. The New Zealand medical journal. Acta Obstet Gynecol Scand 2011;124:1175 8716.
7. Tanjona RA, Romuald RM, Housni IA, Martial RA, Randira JM. Contraceptio, obstetrics and gynecology. Acta Int J Reprod 2018;86:3644-5.
8. Sheiner E, Levy A, Katz M, Mazor M. Identifying risk factors for peripartum cesarean hysterectomy. A population-based study. J Reprod Med 2003;48:622-6. PMID 12971143.
9. Selo-Ojeme DO, Bhattacharjee P, Izuwa-Njoku NF, Kadir RA. Emergency peripartum hysterectomy in a tertiary London hospital. Arch Gynecol Obstet 2005;271:154-9. doi: 10.1007/s00404-004-0715-x, PMID 15690169.
10. Muench MV, Baschat AA, Oyelese Y, Kush ML, Mighty HE,

Malinow AM. Gravid hysterectomy: A decade of experience at an academic referral center. J Reprod Med 2008;53:271-8. PMID 18472650.

11. Nwobodo E, Nnadi D. Emergency obstetric hysterectomy in a tertiary hospital in Sokoto, Nigeria. Ann Med Health Sci Res 2012;2:37-40. doi: 10.4103/2141-9248.96935, PMID 23209989.
12. Kastner ES, Figueroa R, Garry D, Maulik D. Emergency peripartum hysterectomy: Experience at a community teaching hospital. Obstet Gynecol 2002;99:971-5. doi: 10.1016/s0029-7844(02)01999-3, PMID 12052583.
13. Barclay DL. Caesarean hysterectomy: Thirty years' experience. Obstet Gynecol 1970;35:120-31.
14. Zelop CM, Harlow BL, Frigoletto FD, Safon LE, Saltzman DH. Emergency peripartum hysterectomy. Am J Obstet Gynecol 1993;168:1443-8. doi: 10.1016/s0002-9378(11)90779-0, PMID 8498425.
15. Singh A, Hada M, Yangzom AG. Emergency peripartum hysterectomy. J Obstet Gynaecol 2006;1:33-6.