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Original Research Article

Indications and outcome of emergency obstetrics hysterectomy in last 5 years at ACPM medical college Dhule

Nitin Naresh Kulkarni^{1,*}, Chaitanya Sukhdeo Deore¹,
Prashant Sewakram Athawale¹

¹A.C.P.M. Medical College, Dhule, Maharashtra, India



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ABSTRACT

Background: Emergency Obstetric Hysterectomy (EOH) is the process of surgical removal of the uterus after an unexpected & sudden event. EOH acts as a bridge between life-threatening postpartum hemorrhage & death.

Objectives: 1. To study the indications & risk factors responsible for emergency obstetrics hysterectomy. 2. To study the outcome of emergency obstetrics hysterectomy.

Methodology: The present study is a retrospective descriptive study conducted at the department of Obstetrics and Gynecology, ACPM Medical College, Dhule over a span of 5 years from 2016 to 2021.

Results: In the present study, out of the 6250 patients, 50 patients underwent EOH. The incidence rate was 8 per 1000 deliveries. 32 (64%) were within the age group of 26-30 years, with a mean age of 27.8 ± 2.4 years. Atonic PPH (48%) was the commonest indication. Previous LSCS (76%) & antepartum hemorrhage (48%) were found the main risk factors for EOH.

Conclusion: Uterine atony & morbidly adherent placenta are the most common indications for EOH. Previous LSCS & antepartum hemorrhage were found the main risk factors. Needs much more research to decrease mortality and morbidity in cases requiring EOH cause of advances in interventional radiology.

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1. Introduction

Emergency Obstetric Hysterectomy (EOH) is the process of surgical removal of the uterus after an unexpected & sudden event. If this process is carried out in a woman with a pregnant uterus less than 24 hours after delivery then it is termed an Emergency peripartum hysterectomy.¹ In modern obstetrics, the overall incidence of a cesarean hysterectomy is expected to be 0.05%. But in reality, there is a considerable difference in the incidence in low-income & high-income countries.²

Emergency cesarean hysterectomy was done for the first time by Horatio in 1869 without result. But Edward Porro in

1876 did the first successful obstetric hysterectomy on a 15-year-old primiparous dwarf. As per the latest data published by UNICEF in September 2019, 27% of the maternal deaths were caused due to hemorrhage being the leading cause of maternal mortality.³

In low resource setting, to manage the obstetric hemorrhage effectively, conservative methods like community-based use of misoprostol, condom catheter balloon, oxytocin in prefilled auto-disabled drug delivery system, non-inflatable anti-shock garments, uterine massage or compression sutures were advocated. In case of failure of conservative measures, EOH was performed. In some conditions, EOH was the only measure to save the life of the patient like morbidly adherent placenta. Uterine atony, ruptured uterus, placenta previa, broad ligament hematoma

* Corresponding author.

E-mail address: kulkarnink76@gmail.com (N. N. Kulkarni).

& sepsis are the leading indications for this procedure. Delay in approach leads to adverse perinatal outcomes.^{4,5} The commonest indications demanding EOH were uterine atony & uterine rupture. However, recently it has been noted that these indications are followed by placenta accrete.⁶

Emergency Obstetric Hysterectomy is considered with a dilemma of selecting between saving life & sacrificing fertility, so it is important this should be prevented as much as possible. Even though rendering the women sterile, EOH acts as a bridge between life-threatening postpartum hemorrhage & death. World-wide incidence of EOH complications was almost 1/1000 deliveries, higher in low & middle-income compared to upper-middle & high-income settings.⁷

The rationale of this study was to identify the risk factors and indications leading to EOH as well as to study the maternal & neonatal outcomes.

2. Methodology

The present study is a medical record-based retrospective descriptive study at the department of Obstetrics and Gynaecology, ACPM Medical College, Dhule over a span of 5 years from 2016 to 2021. All the patients who underwent obstetric hysterectomy for any indication, performed after 28 weeks of gestational age (Peripartum hysterectomy) were included in this study. While Hysterectomies were done electively or for any gynecological indications like cervical carcinoma & leiomyoma were not excluded from the study.

After taking ethical approval from the institutional Ethical Committee, records of all the patients as per inclusion criteria within the stipulated duration were reviewed. Data were extracted regarding the age of the mother, parity, gestational age, and mode of delivery. Also, the data on risk factors & indications for Emergency Obstetric Hysterectomy along with outcomes of the procedure including the need for blood transfusion, admission to intensive care unit, peripartum maternal or fetal morbidity as well as mortality.

2.1. Statistical analysis

Data was entered in Microsoft Excel 2010 and data analysis was done by using Open Epi info version 6. Numerical data were presented as Mean \pm SD while categorical data were presented as percentages & results were presented in tables & figures.

3. Results

In the present study, out of the 6250 patients delivered from 2016 to 2021, 50 patients underwent emergency hysterectomies. The incidence rate of EOH was calculated to be 8 per 1000 deliveries.

In this study, the maximum number of patients 32 (64%) were within the age group of 26-30 years, with a mean

Table 1: Distribution as per demographic details of the patients who underwent EOH

Parameter	Variable	Frequency	Percentage
Age Group	< 25 years	07	14
	26 – 30yrs	32	64
	> 31	11	22
Parity	1	03	06
	2-3	39	78
	>4	08	16
ANC Registration	Yes	44	88
	No	06	12
Mode of delivery	Vaginal	29	58
	LSCS	21	42
Total		50	100

maternal age of 27.8 ± 2.4 years. In terms of parity, the second and third para was more frequent (78%). Only 12% of the pregnancies were not registered. (Table 1)

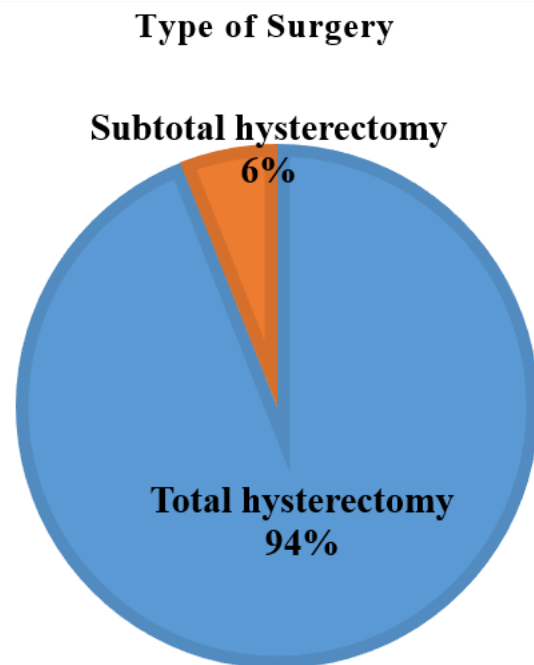


Fig. 1: Distribution as per the type of surgery in EOH

Table 2 shows, out of the total of 50 patients, 38 (76%) patients with previous LSCS had a hysterectomy. Previous LSCS (76%) & antepartum hemorrhage (48%) were found the main risk factors for EOH.

Atonic PPH (48%) was the commonest indication found for EOH followed by the morbidly adherent placenta (40%) & placenta previa (30%). While uterine sepsis was found indication for EOH in 13 patients. While because of the ruptured uterus, 08 patients underwent hysterectomies. (Table 3)

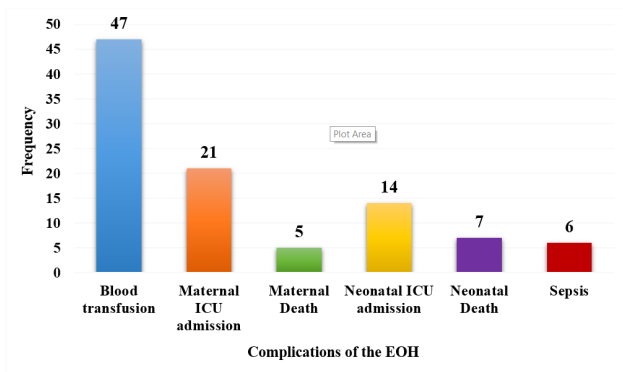


Fig. 2: Complications of emergency hysterectomy in the study population

Table 2: Risk factors of emergency obstetric hysterectomy in the study population

S. No.	Risk factors	Frequency	Percentage
1	Previous LSCS	38	76
2	Sepsis	06	12
3	IUFD	04	08
4	APH	24	48
5	PIH/Preeclampsia/ Eclampsia	07	14
6	Total	50	100

Table 3: Indications of emergency obstetric hysterectomy in the study population

S. No.	Indications for the EOH	Frequency	Percentage
1	Atonic PPH	24	48
2	Uterine rupture	08	16
3	Morbidly adherent placenta	20	40
4	Placenta Previa	15	30
5	Uterine Sepsis	13	26
6	Total	50	100

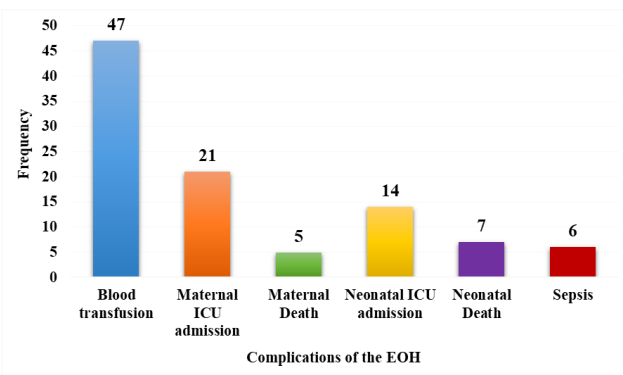


Fig. 3: Complications of emergency hysterectomy in the study population

Nearly all the patients (94%) needed blood transfusion post-hysterectomy. 42% of mothers got serious after the surgery and needed ICU admission out of them 23.8% died. While 28% of the newborn were admitted to the Neonatal Intensive Care Unit (NICU). Neonatal mortality in this study was 14%. (Figure 2)

4. Discussion

In the given study, it was observed that the mean age was 27.8 ± 2.4 years while 64% were in the age group of 26-30 years. The findings in our study were similar to studies conducted by Dogra A. et al¹ it was 29.4 years. Rana S. et al² also reported similar mean age of 27 years. Similarly, Dani A. et al.³ reported mean age of 26.3 years.

In our study, the majority of the patients had a history of multiparity. Most common (78%) parity was 2 to 3, a similar observation was found in a study conducted by Dogra A et al.¹ it was 76%, Chawla Jaya et al.⁴ reported 66.07% of patients with parity 2 to 3. While Dani A et al.³ found that 84.6% of patients had a history of multiparity. Similar results were seen in a study done by Aslam L. et al.⁵ reported that 79.16% were multipara in their study. The majority (88%) of the patients have registered ANC cases while the remaining 12% were unbooked & were referred late from the peripheral health care centers.

The incidence of a peripartum hysterectomy varies from 0.2-0.85 per 1000 deliveries. In our study, we found an incidence of 8 per 1000 deliveries. Similar results were reported in a study conducted by Aslam L. et al⁵ 7.05 per 1000 deliveries. While results in our study are in contrast with studies conducted by Dogra A. et al¹ it was 1.32 per 1000 deliveries, also Rana S. et al² reported 0.2 per 1000 deliveries. Similarly, a study conducted by Mbakwa et al⁷ found an incidence of 0.3 per 1000 deliveries.

Previous LSCS was found to be the most common (76%) risk factor for EOH followed by antepartum hemorrhage (APH) (48%). A study conducted by Dani A. et al³ reported that 69.2% of the patients had a history of previous LSCS followed by 53.84% with APH. Similarly, a study done by Aslam L. et al.⁵ reported a 66.6% prevalence of previous LSCS. Also, Satia M et al.⁸ reported that, 68% of the patients delivered their previous child by LSCS.

In our study, atonic Post-Partum Hemorrhage (PPH) was the commonest (48%) indication for EOH. Similar results were reported in a study conducted by Dogra A. et al,¹ Dani A. et al,³ Satia M et al.⁸ as 32%, 46.1% & 48% respectively. While the study conducted by Chawla J et al⁴ reported atonic PPH in 25% of the patients. Indication of EOH in the present study was atonic PPH which was followed by the morbidly adherent placenta (40%) and placenta previa (30%). The results in our study are similar to the study conducted by Dogra A. et al,¹ where atonic PPH (32%) was followed by the morbidly adherent placenta (30%) and placenta previa (12%). However, a study done

by Satia M et al.⁸ reported the commonest indication being atonic PPH (48%) followed by placenta previa (34%). While Zhang Y. et al⁶ reported morbidly adherent placenta as the commonest (53.1%) indication in their study followed by atonic PPH (37.5%).

EOH is associated with heavy blood loss therefore, blood transfusion is required in almost all (94%) patients underwent EOH. Findings in our study are similar to study conducted by Dogra A et al¹ found that, 68% of the patients needed blood transfusion while study conducted by Dani A. et al³ reported that all of the patients required blood transfusion. Maternal morbidity leading to ICU admission was reported in 42%. Maternal ICU admission was reported in studies conducted by Rana A et al.,² Chawla J et al.⁴ & Satia M et al.⁸ as 24%, 35.7% & 68% respectively. 28% of the newborn were admitted to the Neonatal Intensive Care Unit (NICU) while neonatal mortality in this study was 14%. Studies conducted by Rana A et al.,² Chawla J et al.⁴ & Satia M et al.⁸ reported neonatal ICU admission as 6%, 17.9% & 32% respectively. While neonatal deaths were reported by Rana A et al.² as 15% and 28.6% neonatal mortality by Chawla J et al.⁴

5. Conclusion

As uterine atony & morbidly adherent placenta are the most common indications for EOH, it is recommended that the abnormal position of the placenta should be diagnosed by imaging during the antenatal period and elective surgery should be planned accordingly.

Previous LSCS & antepartum hemorrhage were found the main risk factors for EOH. Timely recognition of the risk factors in a high-risk group is essential to improve the maternal outcome.

The outcome of the EOH mainly depends upon timely decisions, good clinical judgment, expert help & Timely referral to a tertiary care center with proper patient counselling. Needs much more research to decrease mortality and morbidity in cases requiring EOH cause of advances in interventional radiology.

6. Source of Funding

None.

7. Conflict of Interest

None.

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Author biography

Nitin Naresh Kulkarni, Professor  <https://orcid.org/0000-0002-2540-0217>

Chaitanya Sukhdeo Deore, Resident

Prashant Sewakram Athawale, Resident

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