

Complications Associated with Emergency Obstetric Hysterectomy: A two year review at Lahore General Hospital, Lahore

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ABSTRACT

Background: Emergency obstetric hysterectomy is removal of the uterus to stop life threatening obstetric hemorrhage when all other measures fail. The life threatening hemorrhage and unavoidable emergency removal of the uterus is associated with considerable morbidity and mortality.

Aim: To review the complications associated with the potentially avoidable procedure of EOH.

Methods: All the women, regardless of booking status, presenting in emergency labor room and OPD of Gynae Unit 3 from January 2020 to December 2021, who underwent EOH were included in the study. Preventive measures and complications associated with the EOH were reviewed.

Results: Total number of births recorded in two years, between January 2020 and December 2021 were 6809. Out of these, vaginal deliveries were 3669 (53.8%) and remaining were the Caesarean sections, 3140 (46.1%). Out of 48 EOH performed, majority of the complications (61.5%) encountered were hypovolemic shock, coagulopathy, re-exploration, and visceral injuries, each being 15.38% of the complications.

Conclusion: EOH being the life-saving surgical procedure is associated with significant complications. Improving the antenatal care and health education of women can reduce the maternal morbidity and mortality especially in the developing countries.

Key words: Obstetric hemorrhage, EOH, complications.

INTRODUCTION

The number of women who died globally due to preventable causes of pregnancy and childbirth, each day in 2017 was 810¹. Currently, the maternal mortality ratio (MMR) in Pakistan is 186 deaths per 100000 live births². The most common cause of death is obstetrical haemorrhage^{3,4,5}. Emergency Obstetric Hysterectomy (EOH) is performed as a life-saving surgical intervention in uncontrolled postpartum hemorrhage where other measures to control bleeding fail⁶. In recent era, most common reasons for performing EOH are uterine atony and morbidly adherent placenta⁷.

Incidence of EOH is different globally, its range is between 0.64-5.09 per1000 deliveries^{8,9}. The factors leading to high incidence of EOH in developing countries including Pakistan are poor antenatal attendance, deliveries conducted by traditional birth attendants and delay in reaching the proper medical care facilities¹⁰.

Aim of the current study is to review the complications related with uncontrolled postpartum hemorrhage and EOH. Further, we tried to note the factors associated with the poor outcomes of this potentially avoidable condition of the delivering women. This may help to initiate the measures to improve our health care services in reducing maternal morbidity and mortality.

MATERIAL AND METHODS

The protocol of the descriptive study was presented to and approved by the ethical committee of the institution. All the women presenting in emergency labor room and outpatient department of Gynae Unit 3 from January 2020 to December 2021, who underwent EOH were included in the study. Their detailed demographic data like age, parity, previous mode of delivery, booking status and risk factors for EOH were noted. All the procedures were performed by the Senior Registrars or the level above.

In cases of referred patient, measures to prevent EOH were applied and factors associated with the untoward outcome of EOH and complications related with the vaginal delivery or caesarian

section was recorded. Intra-operative findings, operating time, estimated Blood loss, any adjacent visceral injury, number of blood transfusions and per-operative complications were noted. Post-operative morbidity like fever, wound infection and coagulopathy, prolonged ICU care and hospital stay was also reviewed. Data was collected and analyzed by SPSS version 20.

RESULTS

Total number of births recorded in two years, between January 2020 and December 2021 were 6809. Out of these, vaginal deliveries were 3669 (53.8%) and remaining were the Caesarean sections, 3140 (46.1%). EOH performed in these two years were 48 (prevalence of 7.05 per 1000 deliveries). Table 1 shows the demographic features of the study group. Majority of the patients belonged to the age group of 20-30 years (41.67%). Major group regarding parity was para 2-5 (79.16%).

Table-1: Age and Parity of patients(48 patients)

	n	%age
Age		
<20 years	None	-
20-30 years	20	41.67
31-35 years	18	37.5
>35 years	10	20.83
Parity		
Para 1	02	4.16
Para 2-5	38	79.16
Para 5 or more	08	16.67

Table-2: Complications of EOH

	n	%age
Complications	26	54.2
Fever	02	4.16
Wound Infection	02	4.16
Coagulopathy	04	8.32
Paralytic Ileus	02	4.16
Visceral Injury	04	8.32
Hypovolemic Shock	04	8.32
Blood Transfusion Reaction	02	4.16
Re-laparotomy	04	8.32

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Table-3: Length of post-operative stay

No. of Days	n	%age
1-7	32	66.67
8-10	10	20.83
11 or more	06	12.5

Among the EOH group, 30 patients (62.5%) had Caesarean section in the index pregnancy while 18 (37.5%) had spontaneous vaginal delivery. Indications for EOH were Uterine atony 12(50%), morbidly adherent placenta 22(5.8%) cases and uterine rupture 2(4.15%). Complications noted are shown in table-2. Hypovolemic shock, coagulopathy, re-exploration and visceral injuries were recorded in most of the patients which account for 33.28% of the total EOH cases. Other complications included fever, wound infection, paralytic ileus and blood transfusion reaction (4.16% patients fall in each category).

Most of the patients were discharged within the first week post-operatively (66.67%). 12.5% patients had a prolonged stay of 11 days or more.

DISCUSSION

Lahore General Hospital is a tertiary care hospital which receives a large number of complicated patients delivered at home or at unregistered, so called maternity health clinics by traditional birth attendants. A number of complicated cases are referred to the tertiary care medical facility after caesarean section performed at clinics lacking the basic medical infrastructure and personnel to handle the surgical complications like intractable postpartum hemorrhage ending in hysterectomy. Prevalence of EOH in our study is 7.05 per 1000 deliveries which is much higher than in studies conducted by Tebeu et al and Nana Njamen T et al which showed the prevalence of 1.25 per 1000 deliveries and 1.14 per 1000 deliveries respectively^{11,12}. Reasons for this high prevalence are the type of referrals which our hospital receives, delay in reaching the hospital and un-booked patients. Major chunk of these patients presented with hypovolemic shock, sepsis or coagulopathy which further complicates the picture.

Most of the patients (57.53%) who had EOH were 30 years of age or more which is comparable to the age group described by Sarah Kazi⁷. It was most common in the group of women having parity between 2 and 5 (79.16%). Rossi et al also found multiparity an important risk factor for EOH¹³.

Most common indication for EOH in our study was atony of uterus (50%). The factors which may explain the reason for this are the delayed presentation to the hospital, poor health status of the pregnant women like anaemia and lack of antenatal care. All these factors lead to intractable blood loss before reaching the hospital leading to coagulopathy. Fornal et al also found atony the main indication for EOH¹⁴. Second most common reason (45.8%) for EOH in our study was morbidly adherent placenta (MAP). As a consequence of rising trend in caesarean sections, MAP poses a significant problem, both in the developing and the developed world. Our findings regarding MAP as the 2nd most common indication of EOH are supported by the studies conducted by Tapisiz et al & Knight et al¹⁵⁻¹⁶. Third indication for EOH in our study was ruptured uterus.

Most frequent complications noted in our study were hypovolemic shock, visceral injury, coagulopathy and re-laparotomy (8.32% each). These findings are similar to those reported by Chauhan et al¹⁷. Mahbuba et al observed shock in 12.5% of patients of EOH group¹⁸. They found it in postop period.

Bladder injury occurred in 2 patients. One patient suffered from ureteric injury and another had small bowel injury in the form of serosa tear. All these women had previous caesarean sections and there were adhesions present. These injuries were repaired during the procedure and the patients recovered uneventfully. Coagulopathy, being a significant problem due to intractable hemorrhage, was managed by correcting the deficiencies by transfusion of blood and its products. Kazi S found it in 12.5% of her cases⁷. She also reported re-laparotomy in 9.4% of patients.

We had to do re-exploration in 8.32% cases for the signs of continuous bleeding. It was managed by suturing or coagulating the bleeding points. Packing of peritoneal cavity was done in one patient.

Wound infection was noted in 4.16% of our cases and was reported in 7.5% by Mahbuba et al & 6.3% by Kazi S. Regarding hospital stay, most of the patients (66.6%) were discharged within the first post-operative week. In contrary to 3% death reported by Kazi S, we did not have any death recorded.

CONCLUSION

EOH is a life-saving procedure with unavoidable complications even in this modern era. Despite rapidly evolving interventional radiology in controlling obstetric hemorrhage, importance of well trained personnel performing EOH cannot be underestimated especially in third world countries. Improving the health of women and enhancing antenatal services can lead to decrease number of this procedure and associated complications.

Conflict of interest: Nil

Author contribution: LA: Conception, design, acquisition, analysis, interpretation of data and manuscript writing, NS: Manuscript draft, study design, Review of article, NA: Literature review and case selection, AS: Data interpretation, statistical analysis, AAS: review of article, MG: Data collection

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