

# Indications and Outcomes of Emergency Obstetric Hysterectomy at Tertiary Care Hospital

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## ABSTRACT

To analyze the indications and outcomes of the emergency obstetric hysterectomy at tertiary care hospital.

**Materials and Method:** The current descriptive cross-sectional study was conducted for the period of six months from December 2021 to May 2022, at the Department of Obstetrics and Gynecology, Ayub Teaching Hospital Abbottabad. A total of 88 females were selected through a purposive sampling technique and the females were from 20- 40 years of age. Informed consent was obtained from each participant who was willing, in addition, they were assured that their privacy and confidentiality will be maintained. The data was collected through a well-structured questionnaire from each participant. All the data were analyzed properly by using the latest version of SPSS 24.

**Results:** There were 88 female's patients who underwent emergency obstetric hysterectomy. 23.86 % and 30.68 % of the patients were aged 31-35 and 36-40 years, and most of them were multiparous. 26. 13 % of the cases were with uterus rupture, while 21.59 % of the patients were presented with adhered placenta, which was mainly associated with a previous history of cesarean section. In addition, 19.31 % of the cases were presented with atonic postpartum hemorrhage. 14.7 % of the individual have uterine atony. 39.77 % of the patients had developed anemia after the surgery, while 21.59 % of patients needed a vasopressor, along with that, 7.95 % of the patients were admitted to the intensive care unit, and 3.40 % were reopened (repeated laparotomy).

**Conclusion:** The present study concluded that cesarean sections were the main contributing factors to emergency obstetric hysterectomy that leads to placental abnormalities, moreover, uterine rupture and adherent placenta as the main causes of EOH. Therefore, the frequency of cesarean sections needs to be reduced and more care is needed for the patients during and after the surgeries to minimize the complications.

**Keywords:** Laparotomy, placental abnormality, anemia, cesarean section.

## INTRODUCTION

Life of the females can be saved through the emergency obstetric hysterectomy (EOH). It is usually performed in situations when all other options are unsuccessful in controlling the bleeding (hemorrhage). It is usually performed in the enlarged womb or in the early stages of postpartum time when there is evidence of persistent bleeding. Bleeding may be due to conditions like an abnormality in the placenta, rupture or partial rupture of the uterus, and perforation in the uterus, 31.7 % of EOH was due to rupture or partial rupture of the uterus and placental adherent conditions (21.9 %) <sup>1,2</sup>. According to Salih AA et al, women with a medical history of cesarean sections were more commonly undergone through EOH, moreover, the most common reason for emergency obstetric hysterectomy was a grossly adhered placenta (56.3 %). The most prevalent parental and neonatal problems were bladder damage and NICU admission <sup>3,4</sup>. The rate of EOH increased dramatically between 2016 (0.37%) and 2019 (2.48%). The morbidly adhesive placental has grown to be the most common cause of EOH. Authorities have to implement the necessary steps to lower the frequency of deliveries by cesarean section <sup>5</sup>. In this study We have concluded that currently accreta of the placenta (60 %) continuum is the most prevalent cause of EOH, it is mainly due to the prevalence of cesarean section globally, additionally, most of these women Who have EOH had a history previously done cesarean sections. We infer that lowering the main type of cesarean birth frequency may reduce the frequency of placenta accrete, which will result in a lowering of EOH, its associated mortality, and morbidity <sup>6</sup>. The most common reasons for EOH were placenta previa, in addition to morbidly adhered placental (40 %) combined background of many past cesarean deliveries, and womb tears (30 %). Women who have undergone previous cesarean deliveries need to be provided with appropriate prenatal services <sup>7</sup>. Peripartum hysterectomy is a crucial life-saving

operation that is linked with significant parental morbidity as well as mortality. The present research discovered that adverse psychological, physiological, and societal consequences were likely to persist over the course of time <sup>8</sup>. The number of cases of EOH in the current investigation remained elevated, while rupture of the uterus (47.8 %) was the most common cause. The majority of post-EOH consequences were wound-related sepsis (23.2 %), and the condition like anemia (86.9%), with a substantial mortality incidence <sup>9</sup>. Multiparity and having had a previous cesarean section, PPH (47.5 %), and ruptured uterus (35 %) were significant contributing factors for Obstetric hysterectomy, which results in a significant rate of parental morbidity as well as death <sup>10</sup>. Early obstetric hysterectomy minimizes parental morbidity as well as death. Much of the complication occurs due to the operation's justification and underlying medical condition instead of the surgical interventions alone. EOH is primarily caused by the placental (32%), accompanied by PPH (25.8%). The greatest prevalent consequence is a condition known as DIC and mortality among mothers amounts to approximately 16.12% <sup>11</sup>.

**Aim and objective:** To analyze the indications and outcomes of the emergency obstetric hysterectomy at tertiary care hospital.

## MATERIALS AND METHOD

The current descriptive cross-sectional study was conducted for the period of six months from December 2021 to May 2022, at the Department of Obstetrics and Gynecology at Ayub Teaching Hospital Abbottabad, after the provision of an institutional review board of the hospital. A total of 88 females were selected through a purposive sampling technique and the females were from 20- 40 years of age. All these females underwent an emergency obstetric hysterectomy, and become a part of the after proper guidance and information were provided regarding the study. Informed consent was obtained from each participant who was willing, in addition, they were assured that their privacy and confidentiality will be maintained. All those females included in the study who underwent EOH and were willing to participate and those with diabetes

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mellitus, hypertension, autoimmune diseases like various types of cancers, and other chronic diseases were excluded from the study. The data was collected through a well-structured questionnaire from each participant. All the data were analyzed properly by using the latest version of SPSS 24.

## RESULTS

The results of the current study are presented in the easily understandable tables below. Table # 021 shows the sociodemographic characteristics of the participants. There were 88 female's patients who underwent emergency obstetric hysterectomy. 23.86 % and 30.68 % of the patients were aged 31-35 and 36-40 years. The mean age of the women's was 27.23 years with a standard deviation of 3.82. 21.59 %, and 26.13 % were of second and third parity, moreover, 22.72 % of them were first and above parity.

Table # 02 shows the various conditions below that act as an indication for emergency obstetric hysterectomy. 26.13 % of the cases were with uterus rupture, while 21.59 % of the patients were presented with adhered placenta, which was mainly associated with a previous history of cesarean section. In addition, 19.31 % of the cases were presented with atonic postpartum hemorrhage. 14.7 % of the individual have uterine atony.

Table #03 shows the outcomes of the emergency obstetric hysterectomy. The following complications were experienced by the participants. 32.95 % had experienced fever post-operatively. 39.77 % of the patients had developed anemia after the surgery, while 21.59 % patients were needed a vasopressor, along with that, 7.95 % of the patients were admitted to the intensive care unit, and 3.40 % were reopened (repeated laparotomy), and disseminated intravascular coagulation was developed in 5.10 % of the patients. The maternal mortality was 1.13 %, and the infant's mortality was 10.22 %. 19.31 % of the infants were admitted to the intensive care unit.

Table 1: Sociodemographic characteristics

Age in years	Number	Percentage
20-25	23	26.13 %
26-30	17	19.31 %
31-35	21	23.86 %
36-40	27	30.68 %
Parity of patients		
One	11	12.5 %
Two	15	17.07 %
Three	19	21.59 %
Four	23	26.13 %
Five and above	20	22.72 %
Previous C-section	51	57.95 %

Table 2: Indications for Emergency Obstetric Hysterectomy

Indications	Number	Percentage
Rupture of uterus	23	26.13 %
PPH (atonic)	17	19.31 %
Infected uterus (sepsis)	03	3.40 %
Uterine atony	13	14.77 %
Adherent placenta	19	21.59 %
Abruptio placenta	7	7.95 %
Placenta previa	6	6.81 %

Table 3: Post-op Complications

Complications	Number	Percentage
Laparotomy (repeated)	3	3.40 %
Fever	29	32.95 %
Coagulopathy	5	5.10 %
Sepsis	2	2.27 %
Vasopressor need	19	21.59 %
Anemia	35	39.77 %
Admission at ICU	7	7.95 %
Mortality	1	1.13 %
DIC	5	5.10 %
Bladder injury	3	3.40 %
Fetal mortality	9	10.22 %
Fetal NICU admission	17	19.31 %

## DISCUSSION

Emergency obstetric hysterectomy (EOH) is always a very difficult decision to take because EOH has long-term consequences on the patient's life. On-time and prompt decisions in response to the condition can save the patient's life. The surgical interventions need to be very precise, in order to minimize the complications. Most of the patients having a prior medical history of cesarean sections are prone to emergency obstetric hysterectomy. Approximately, 70 % of the patients were multiparous in the current study, while the results of the other studies show that 98 % of the women were multiparous and the maternal mortality rate of 1.13 %, which is lower than the other studies that were conducted by Kaaky NS et al and Mesbah Y et al<sup>12,13</sup>. 57.95 % of them had a history of previous cesarean sections, and 3.40 % of the patients underwent re-laparotomy in the current study, however, a study conducted by Aslam L et al concluded that 70.8 % of the patients had a prior history of cesarean sections and 8.32 % of the patients underwent for re-laparotomy [14]. Mohammed IA et al concluded that maternal mortality was up to 16.7 % and DIC 0.10 %, while the current study results show DIC 5.10% postoperatively<sup>15</sup>. According to Pandher DK et al the main cause of emergency obstetric hysterectomies as PPH (31.7 %) and uterus rupture (31.7 %), but the current study shows 26.13 % of uterus rupture and 19.31 % of PPH<sup>16</sup>. Atonic PPH (28.9 %) was the main reason for EOH, while 2.5 % of them were placenta previa, and post-op infection was 11.6 % developed by the patients<sup>17</sup>. The study shows that only 3.40 % of the patients had developed post-op bladder injury which is quite lower than other studies that concluded bladder injury up to 21.6%<sup>18</sup>. In the present study, we concluded that vasopressor (21.9%) of the patients post-operatively, while similar results were shown by 20 %, and 13.33 % of the patients had sepsis but the current study shows 2.27 %. Previous studies show around 60 % of fetal mortality, and 26.60 % of fetuses were admitted to NICUs, while the present study concluded 10.22 % of fetal mortality and 19.31 % of the fetus were admitted to the NICU<sup>19,20</sup>. The present study shows that 26.13 % had a ruptured uterus, 19.31 % had atonic PPH, and 6.81 % had placenta previa, while comparable results were shown by other studies, that is 18 %, and 30 % uterine rupture, 32 % atonic PPH, 12 %, and 5 % had placenta previa<sup>07,21</sup>.

## CONCLUSION

The present study concluded that cesarean sections were the main contributing factors to emergency obstetric hysterectomy that leads to placental abnormalities, moreover, uterine rupture and adherent placenta as the main causes of EOH. Therefore, the frequency of cesarean sections needs to be reduced and more care is needed for the patients during and after the surgeries to minimize the complications.

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