Section: Obstetrics and Gynaecology

Original Research Article

# RETROSPECTIVE ANALYSIS OF EMERGENCY OBSTETRIC HYSTERECTOMY IN A TERTIARY CARE HOSPITAL

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## Abstract

**Background:** Emergency obstetric hysterectomy is the surgical removal of the uterus during caesarean section or following normal delivery or caesarean section within the puerperium. It is usually done in the setting of life-threatening emergencies mostly following the uncontrolled obstetric haemorrhage. Aim & Objective: The aim of the study is to find out the incidence, demographic characters, indications, maternal and neonatal outcomes in patients who had undergone the emergency obstetric hysterectomy. **Materials and Methods:** Retrospective analysis of the emergency obstetric hysterectomy which was performed during the period from April 2021 to March 2023 was done. This study was carried out in a tertiary care hospital. **Results:** The incidence of obstetric hysterectomy during the study period was 194 per 1, 00,000 deliveries. Atonic PPH (45.83%) was the most common indication. Other indications were Placenta accreta (8.33%), Uterine rupture (16.67%), Sepsis (8.33%). Maternal morbidity following hysterectomy were bladder injury,wound infection,paralytic ileus, DIC recovered. Maternal mortality was 4.16%. **Conclusions:** Emergency obstetric hysterectomy can be a lifesaving procedure when all the conservative methods failed. In most of the times it is an unpredictable procedure in which an obstetrician may land upon.

## INTRODUCTION

Emergency obstetric hysterectomy is the surgical removal of the uterus during caesarean section or following normal delivery or caesarean section within the puerpeium. It is done mostly as a lifesaving procedure following the uncontrolled postpartum haemorrhage after other conservative methods failed.[1,2] According to WHO, direct obstetric causes are responsible for 73% of maternal deaths among which the postpartum haemorrhage is the leading cause.[3] When the PPH occurs, simultaneous evaluation for PPH etiology along with conservative managements like uterotonics, uterine massage, bimanual uterine compression, balloon tamponade should be tried. If failed,uterine sparing surgical procedures like B lynch, uterine artery ligation, internal iliac artery ligation to be tried.[4] Abnormal placentation mainly due to increased rate of caesarean section is also one of the major reasons for increased incidence of emergency obstetric hysterectomy.[5,6] Blood and blood products to be replaced depending upon the loss. Timely decision and intervention will save the life of the mother. Early referral of high-risk cases to be emphasised at all levels of care.

## MATERIALS AND METHODS

Retrospective analysis of 24 cases of emergency obstetric hysterectomies done in a tertiary care hospital for a period of 2 years from April 2021 to March 2023 was done.

**Inclusion Criteria**

Women who underwent emergency obstetric hysterectomy during caesarean section or following normal delivery, caesarean section within the puerperium period were included in the study.

Case sheets were collected and analysed in detail regarding demographic characteristics, indications, type of hysterectomy, anaesthesia, intra,postop complications and fetomaternal outcome.

## RESULTS

Total 24 cases of emergency obstetric hysterectomy occurred among 12322 deliveries during the study period which accounts for 0.194%. Incidence of


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emergency obstetric hysterectomy was 194 per 1 lakh deliveries during that study period.

**Distribution**

1. By age group

**Table 1: By age group. Commonest age group is between 26-30 years (54.17%)**

| Age (in years) | Total | Percentage |
|---|---|---|
| 20 – 25 | 8 | 33.33 |
| 26 – 30 | 13 | 54.17 |
| 31 – 35 | 2 | 8.33 |
| 36 – 40 | 1 | 4.17 |

**Table 2: By parity Common in multiparity (87.45%)**

| Parity | Total | Percentage |
|---|---|---|
| Primi | 3 | 12.50 |
| Para 1 | 2 | 8.33 |
| Para 2 | 14 | 58.33 |
| Para 3 | 2 | 8.33 |
| Para 4 | 3 | 12.50 |

**Table 3: By high risk factors. Among the high risk factors, post caesarean pregnancy (45.83%) was the commonest one followed by placenta previa(16.67%)**

| High Risk Factors | Total | Percentage |
|---|---|---|
| Previous caesarean section | 11 | 45.83 |
| Placenta Previa | 4 | 16.67 |
| Twins | 2 | 8.33 |
| Preeclampsia | 1 | 4.17 |
| AP eclampsia with abruption | 1 | 4.17 |
| Elderly gravida | 1 | 4.17 |
| No Risk Identified | 4 | 16.67 |

**Table 4: By previous caesarean.29.17% cases following previous one caesarean section.**

| Number of previous caesareans | Total | Percentage |
|---|---|---|
| 1 | 7 | 29.17 |
| 2 | 4 | 16.67 |

**Table 5: By delivery. 62.50% cases occurred following caesarean section mostly in emergency section**

| Type of Delivery | Total | Percentage |
|---|---|---|
| Normal | 9 | 37.50 |
| Caesarean | | |
| Elective | 2 | 8.33 |
| Emergency | 13 | 54.17 |

**Table 6: Indications for hysterectomy. Atonic PPH (45.83%) was the commonest indication followed by rupture uterus (16.67%)**

| Indications | Total | Percentage |
|---|---|---|
| Atonic | 11 | 45.83 |
| Rupture uterus | 4 | 16.67 |
| Placenta Accreta | 2 | 8.33 |
| Placenta percreta | 1 | 4.17 |
| Broad ligament haematoma | 2 | 8.33 |
| Sepsis | 2 | 8.33 |
| Uterine inversion | 1 | 4.17 |
| Scar pregnancy | 1 | 4.17 |

**Table 7: Type of hysterectomy. Subtotal hysterectomy in 79.17% of cases. Total in 12.5% of cases**

| Type | Total | Percentage |
|---|---|---|
| Subtotal | 19 | 79.17 |
| Subtotal with internal artery iliac ligation | 1 | 4.17 |
| Total | 3 | 12.50 |
| Total with internal artery iliac ligation | 1 | 4.17 |

**Table 8: Fetomaternal outcome. Commonest intraop complication was bladder injury 12.25% . Maternal mortality was 4.16%.**

| Outcomes | Total | Percentage |
|---|---|---|
| Maternal morbidity | | |
| Bladder injury | 3 | 12.5 |


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| | | |
|---|---|---|
| DIC | 3 | 12.5 |
| Wound infection | 2 | 8.33 |
| Paralytic ileus | 2 | 8.33 |
| Maternal mortality | 1 | 4.16 |
| Fetal outcomes | | |
| IUD | 4 | 16.66 |
| alive | 20 | 83.33 |

## DISCUSSION

Emergency obstetric hysterectomy is the lifesaving procedure of removing the uterus mostly during the uncontrollable obstetric haemorrhage. This tertiary care hospital is the major referral centre from other peripheral hospitals. During the study period of 2 years, total 24 cases were done which accounts for 0.194% among total deliveries. This is similar to study by Kastner et al 0.14%.[7] In our study, all were booked cases. Among the analysis of associated risk factors, placenta previa accounts for 16.67% and twin pregnancy for 8.33%. These were observed in study by Bakshi S et al.[8], Francois K et al.[9]No risk factors identified in about 16.67% which explains the unpredictable nature of the complications. Most of the cases (54.17%) occurred in the age group of 26-30 years. Multiparity was accounting for 87.49%. There is an increased incidence of obstetric hysterectomy with increasing parity.[10] 45.8% of cases had previous history of caesarean section which indicates the increased incidence of hysterectomy among the postcaesarean pregnancy.[11] Among the emergency obstetric hysterectomy cases, 62.50% of cases occurred during or following the caesarean section mostly emergency section. Atonic PPH (45.83%) was the commonest indication in this study followed by rupture uterus (16.67%) and abnormal placentation (12.50%).[12,13,14] The type of hysterectomy done was subtotal (83.34%) which can be quickly done with less blood loss and morbidity comparing to total hysterectomy.[15]Total hysterectomy was done when there was bleeding from the cervical region. During/following the procedure, the morbidity occurred were bladder injury (12.5%), DIC (12.5%), wound infection (8.33%), paralytic ileus (8.33%). Maternal mortality was 1 among 24 cases (4.16%) which was 2.2% in study by Shirodker et al.[16] Intrauterine demise occurred in 16.66% of cases among which 75% occurred following rupture uterus.

## CONCLUSION

Obstetric hysterectomy is a procedure should every obstetrician to be trained and well versed since it is a life saving procedure in the setting of uncontrolled life threatening obstetric haemorrhage. Early recognition, timely decision and adequate transfusion of blood and blood products only save the life a mother. Effective team work will do the miracle in saving a life. Since most of the cases were following caesarean section, steps to be taken to reduce caesarean section rate. Early booking and referral of high risk cases to be emphasised in order to reduce the maternal and perinatal morbidity and mortality.

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