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Original Research Article

Complications of emergency obstetric hysterectomy in Gujarat, India

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ABSTRACT

Background: Emergency obstetric hysterectomy is defined as extirpation of uterus either at the time of cesarean section or following vaginal delivery, or within the puerperium to stop life threatening obstetric hemorrhage when all other measures fail. This study was conducted to study complications of emergency obstetric hysterectomy.

Methods: Out of 28552 patients, 45 patients operated for Emergency obstetric hysterectomy in Vadilal Sarabhai Hospital of Ahmedabad, Gujarat; during May 2010 to October 2012 were included in the study. Complications of the procedures were identified and analyzed.

Results: Hemorrhagic shock was the most common complication followed by fever. 15.55% (7 out of 45) mothers were not saved even after the emergency obstetric hysterectomy.

Conclusions: Improvising procedural skill and post-operative care can reduce the complications of emergency obstetric hysterectomy.

Keywords: Emergency obstetric hysterectomy, Haemorrhagic shock, Hysterectomy

INTRODUCTION

Surgical removal of pregnant uterus or recently pregnant uterus is known as obstetric hysterectomy.¹ As one of the markers of obstetric morbidity, it is one of the most risky and dramatic operations in modern obstetric, where the uterus is removed either during caesarean section or following caesarean section or immediately after vaginal delivery or during period of puerperium to reduce maternal morbidity and mortality.² Emergency obstetric hysterectomy (EOH) is defined as extirpation of the uterus either at the time of caesarean section or following vaginal delivery, or within the puerperium period to stop life threatening obstetric haemorrhage when all other measures fail. Emergency obstetric hysterectomy is a lifesaving surgical procedure in life threatening conditions like uterine rupture, morbidly adherent placenta, coagulopathy or uncontrollable haemorrhage.

The commonest indication for Emergency obstetric hysterectomy which is cited in literature is postpartum haemorrhage due to uterine rupture and uterine atony.³

Placenta accrete, uterine vessel laceration, broad ligament haematoma or puerperal sepsis and bleeding from uterine incision are other indications.^{4,5}

Intra-operative and post-operative bleeding leading to haemorrhagic shock, fever, urinary track injury, bladder injury, disseminated vascular injury and septicaemia are common complications of obstetric hysterectomy.⁴⁻⁷ Complications varies in frequency between elective and emergency hysterectomy.

This study was conducted to identify complications and their frequency in cases of emergency obstetric hysterectomy.

Objectives recognized for the study were: identification of complication of emergency obstetric hysterectomy, determining the incidence and frequency of the respective complications

METHODS

This retrospective study was conducted after Institutional Ethical Committee Clearance during May 2010 to October 2012 in the Department of Obstetrics and Gynaecology at tertiary care hospitals of Vadilal Sarabhai Hospital of Ahmedabad, Gujarat, India.

Case of Emergency obstetric hysterectomy was defined as ‘Patients undergone extirpation of the uterus either at the time of caesarean section or following vaginal delivery, or within the puerperium period to stop life threatening obstetric haemorrhage when all other measures fails.’

Patients who delivered between 1st may, 2010 to 31st October 2012 including both days, after 24 weeks of gestations and undergone hysterectomy for obstetric purpose during delivery or within time of puerperium (42 days) were included in the study. Women who delivered before 24 weeks of gestation were not included in the study; patients undergone hysterectomy after the puerperium were also not included in the study.

Case records collected from the hospital records were studied for age, parity, indications, type of procedure and outcome of the procedure; data was compiled and analysed by Microsoft excel 2010 and Epiinfo 7.2.1 software. For statistical significance confidence interval was considered >95% (p value 0.05).

RESULTS

Out of 28552 patients, who delivered during the defined period in the hospital 45 patients operated upon for emergency obstetric hysterectomy were included in the study.

20 years was the smallest and 35 was the maximum age of the patient undergone obstetric hysterectomy. Maximum patients (7 out of 45) were 30 years old (Table 1).

Table 1: Age distribution in emergency obstetric hysterectomy.

| Age (Years) | Frequency (n=45) |
|-------------|------------------|
| 20-25 | 14 (31.11%) |
| 26-30 | 21 (46.66%) |
| 31-35 | 10 (20.22%) |
| Total | 45 |

Haemorrhagic shock was the most common complication of the emergency obstetric hysterectomy in which 5 were

caesarean section and 7 were vaginal deliveries. Second most frequent complication was fever (Table 2).

Table 2: Incidence of complications of emergency obstetric hysterectomy.

| Morbidity/complications | Obstetric hysterectomy emergency (n = 45) |
|--|---|
| Haemorrhagic shock | 12 (26.66%) |
| Fever | 10 (22.22%) |
| Mortality | 7 (15.55%) |
| Bladder injury | 5 (11.11%) |
| Disseminated intravascular coagulation | 4 (8.88%) |
| Wound gaping | 4 (8.88%) |
| Acute renal failure (oliguria) | 3 (6.66%) |
| Paralytic ileus | 2 (4.44%) |
| Re-laparotomy | 2 (4.44%) |
| Urinary tract infection | 1 (2.22%) |
| Septicaemia | 1 (2.22%) |
| Recto vaginal fistula | 1 (2.22%) |

15.55% (7 out 45) mothers were not saved even after the emergency obstetric hysterectomy; among them 3 patients were complicated by haemorrhagic shock, 2 were complicated by Disseminated intravascular coagulation, and one was complicated by acute renal failure; one patients was complicated by both haemorrhagic shock and disseminated intravascular coagulation.

6 patients were Primi Gravida, while 28 were Multi Gravida. One 31 years old 11th Gravida, 3rd Para patient operated upon emergency hysterectomy for placenta previa and postpartum haemorrhage did not have any complication.

One 31 years old, 4th gravid 3rd Para patient having vaginal delivery, undergone emergency hysterectomy for postpartum haemorrhage complicated recto-vaginal fistula.

DISCUSSION

Incidence of Emergency obstetric hysterectomy in the present study (1.57 per thousand) is comparable with other studies (Table 3).^{2,8-18}

In this study, 26-30 years is the age group having highest frequency of the emergency obstetric hysterectomy, the obvious reason is the more frequency of pregnancy in the age group.

62% (28 out of 45) cases were multigravida; uterine injury because of previous pregnancies, low haemoglobin level and repeated caesarean section are aggregating factors making multigravida vulnerable for obstetric hysterectomy.

Table 3: Incidence of emergency obstetric hysterectomy in previous studies.

| Author | Incidence (Per 1000) |
|------------------------|----------------------|
| Ekachai K et al | 0.55 |
| Sohasrabhojane M et al | 3.5 |
| Ahmed S et al | 2.62 |
| Siddiq N et al | 5.6 |
| Marwaha P et al | 3.1 |
| Sharma R et al | 5.4 |
| Javed N et al | 4.2 |
| Sheikh N et al | 6.3 |
| Lamba J et al | 2.13 |
| Zalla S et al | 1.97 |
| Ara S et al | 3.8 |
| George P et al | 0.10 |
| Present study | 1.57 |

Haemorrhagic shock was the most common complication, uterine injury, low haemoglobin level may be the aggravating factors for the complications. Poor postoperative care and wound infection are the cause of fever. Improper stitching, infections, poor postoperative care may be the factor for wound gaping. Bladder injury, paralytic ileus and uterine injury complications indicate required improvising operative skill.

CONCLUSION

Even after, increase in number of hospitals and upgradation of health care facilities, in India Obstetric hysterectomy rate is noticeably not reduced. The factors responsible are increasing incidence rate of caesarean sections, delaying marriage and pregnancy, low level of health education and malnourishment.

Improvising the skill of procedure, avoiding unnecessary caesarean sections and female health education are required steps to be taken to reduce complications of emergency Obstetric hysterectomy.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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