

Observational Study Of Emergency Obstetric Hysterectomy In A Tertiary Care Centre For A Period Of 2 Years

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Abstract

Introduction: Emergency obstetric hysterectomy (EOH) is defined as extirpation of the uterus either at the time of cesarean section or following vaginal delivery, or within the puerperium period. It is usually performed in the face of unrelenting and life-threatening obstetric hemorrhage. A near miss event is defined as a woman who nearly died but survived a complication that occurred during pregnancy, childbirth, or within 42 days of termination of pregnancy.¹ EOH can be rightly classified as a near miss event. It is important to study such events since they provide an insight into the standard of care provided and help to reduce maternal morbidity and mortality.

Materials and Methods: Retrospective Observational analytical study of cases of obstetric hysterectomy performed at Obstetrics and Gynecology department of M.G.M Medical College and Hospital, Jamshedpur over a period of two years was done. Evaluation of Maternal age, parity, gestational age, indication for hysterectomy, the type of operation performed, blood loss, blood transfused, complications, and hospitalization period was done.

Results: The overall incidence of Obstetric hysterectomy in our study was found to be 0.33%, with a maximum number of patients 7 (33%) in the age group of 26-30 yrs. Patients who were para 3 or more were -12 (63%). The causes for an obstetric hysterectomy were PPH – 12 (63%); placenta previa – 5 (26%); ruptured uterus – 4 (21%). 9(47%) patients had a history of previous caesarean section. Out of the 19 hysterectomies performed, 12(63%) were total hysterectomy and 7(37%) were subtotal hysterectomy. Fever was the commonest complication 7(37%). There were two maternal deaths.

Conclusion: Obstetric hysterectomy is a lifesaving procedure. The outcome depends on timely decision, good clinical judgement and professional surgical technique. It reduces maternal morbidity and mortality.

Key words: Obstetric hysterectomy, uterus, surgical technique

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I. Introduction

Emergency obstetric hysterectomy (EOH) is defined as extirpation of the uterus either at the time of cesarean section or following vaginal delivery, or within the puerperium period. It is usually performed in the face of unrelenting and life-threatening obstetric hemorrhage. A near miss event is defined as a woman who nearly died but survived a complication that occurred during pregnancy, childbirth, or within 42 days of termination of pregnancy.¹ EOH can be rightly classified as a near miss event. It is important to study such events since they provide an insight into the standard of care provided and help to reduce maternal morbidity and mortality.

Conservative methods such as community-based use of misoprostol, oxytocin in the prefilled auto-disable drug delivery systems, condom catheter balloon, and non-inflatable anti-shock garments for the management of hypovolemic shock have all been advocated to effectively manage obstetric hemorrhage in low resource settings.² Advances in interventional radiology have also provided the option of uterine artery embolization.^{3,4}

While this does seem encouraging, with regard to clinical implications, hemorrhage continues to be the leading individual cause of maternal death worldwide accounting for 27.1% of deaths as recently as 2014.⁵ In this analysis, India and Nigeria together accounted for a third of global maternal deaths.⁵ More alarming is the fact that some studies from developed nations are pointing towards an increase in the rate of postpartum hemorrhage.⁶ One meta-analysis reported an annual increase of 8% in the incidence of EOH around the world.⁷

II. Materials And Methods

Retrospective Observational analytical study of 25 cases of obstetric hysterectomy performed at Obstetrics and Gynecology department of M.G.M Medical College and Hospital, Jamsheedpur over a period of two years was done. Evaluation of maternal age, parity, gestational age, indication for hysterectomy, the type of operation performed, estimated blood loss, amount of blood and components transfused, complications, and hospitalization period was done. The foetal outcome was also analyzed.

III. Results

During the study period of Seven years total number of deliveries were 6735, of which vaginal deliveries were 3451 and LSCS were 3284. The overall incidence of obstetric hysterectomy was 0.28%, 0.08% was in cases of vaginal delivery and 0.46% was in cases of LSCS for various indications.

Maternal Characteristics – Age and Parity-Age of patients ranges from 22-38 (mean age ≈ 29). Seven patient 37% were in the age group of 26 to 30 years and were multipara (parity > 4). This shows that the incidence of this radical and lifesaving surgery is more in this group.

Antenatal Booking-Fourteen patients (74%) were unbooked and fifteen patients (79%) were from rural area.

Indications- The commonest indication for performing obstetric hysterectomy was postpartum haemorrhage 12(63%) followed by placenta previa 5(26%) and rupture uterus 4(21%).

Previous caesarean section was a significant high risk factor 9(47%), all placenta previa was associated with previous caesarean section 100%.

Type of hysterectomy and associated surgical procedure – Out of the 19 hysterectomies performed, 12 were total hysterectomy and 7 were subtotal. 3 patients underwent internal iliac artery ligation prior to hysterectomy. 1 patient underwent bowel repair.

Postoperative complication – Postoperative shock, paralytic ileus and fever were the common complications.

Blood loss and blood transfusion – The average blood loss was in the range of 2 to 3 litres. All patients underwent replacement therapy with blood and component transfusion.

Hospital Stay – 12(63%) had hospital stay of around 25 days. There were two maternal deaths (11%) in patients with associated medical complication of jaundice and uncontrolled diabetes mellitus.

Age (years)	Number of patients	Percentage
21-25	8	32
26-30	6	24
31-35	7	28
36-40	4	16
Total	25	100

Table 1: Age wise distribution of cases of obstetric hysterectomy.

Indication	Number of patients	Percentage
PPH without placental previa	6	24
Placental previa	6	24
Rupture uterus	5	20
Puerperal Sepsis	4	16
Perforation during termination of pregnancy	2	8
Acute inversion	2	8
	25	100

Table 2: Indications of obstetric hysterectomy.

PPH (14)	Rupture Uterus (5)	Morbidly adherent placenta (6)
Placenta Previa (6)	Previous Caesarean section (9)	Placenta Previa (5)
Prolonged labour (4)	Grand multipara (3)	Previous Caesarean section (9)
Multiple pregnancy (2)	Prolonged labour (3)	
Polyhydramnios (1)		
Postdatism (1)		

Table 3: High risk factors (figure in bracket shows number of patients).

Medical Complications	Obstetric Complications
Rh positive (1)	Prolonged labour (3)
Diabetes mellitus (1)	Multiple pregnancy (2)
Liver disease (1)	Placenta Previa (5)
PIH (4)	Polyhydramnios (1)
Sepsis (2)	Postdatism (1)

Table 4: Associated complications (figure in bracket shows number of patients).

IV. Discussion

Obstetric hysterectomy still is an important tool for the obstetrician. Expert and experienced surgeons in this operation can save lives in catastrophic rupture of the uterus or intractable PPH.[8] Storer performed the first caesarean hysterectomy in the United States in 1869.[9] Soon thereafter Porro of Milan described the first caesarean hysterectomy, in which the infant and mother survived. As a mark of honour, the procedure is frequently referred to as the Porro operation.[9] Caesarean hysterectomy traditionally is classified as elective for the management of incidental diseases like cervical intraepithelial neoplasia (CIN) or for the purpose of sterilisation, and in cases of emergency to control intractable haemorrhage. With changes in practice in the light of modern evidence, the former two indications seem to have lost relevance. However, there has been an upsurge in cases of postpartum haemorrhage requiring hysterectomy, [10] primarily due to the changed settings in which postpartum haemorrhage presents itself in modern obstetrics. Despite wider availability of contraceptives and abortion services and reduced family size the world over, there has been a consistent rise in the rates of caesarean section attributable in part to patient preferences and medico-legal implications on medical fraternity. Additionally, advances in anaesthesia, blood bank facilities and intensive care back-up have made it a safer and painless alternative to labour. This has not only given rise to a surge in complications like abnormal placentation and uterine rupture, but also in the incidence of atonic postpartum haemorrhage. This is why EOH has become increasingly relevant in modern obstetric practice. The most common indication of EOH in our study was uterine atony (60%) followed by morbidly adherent placenta (20%) and uterine rupture (20%). This reflects the situation in most developing countries where atony accounts for the majority of cases of EOH, but also shows a rising contribution of placental causes which is replicating the trend in the developed world. Studies from other tertiary care centres in India, [11] the UK[12] and Turkey[13] also revealed atonic postpartum haemorrhage to be the most common indication for EOH. Complication due to coagulopathy was variable (6% to 37%) in all cases of EOH in various publications. Almost one-fifth of cases (19.6%) underwent a re-exploration and further surgery to arrest haemorrhage in one study from the UK and 12.5% of cases in a study from Hong Kong.[11] Incidence of urinary tract injury in studies from the UK, Nigeria, [14] China[15] and another centres from India[11] were 12.2%, 3.6%, 4.1% and 7.93%, respectively. Many reports and guidelines have advocated the preference for subtotal hysterectomy over total hysterectomy since it offers the advantage of less blood loss, fewer instances of damage to the urinary tract and takes less time to complete in the face of haemodynamic compromise/ instability.[16,17] However, in cases of morbidly adherent placenta, total hysterectomy may prove more beneficial as removal of the cervix leads to better haemostasis.[18]

V. Conclusion

Obstetric hysterectomy is a lifesaving procedure. The outcome depends on timely decision, good clinical judgement and professional surgical technique. It reduces the maternal morbidity and mortality.

Proper antenatal care, identification of high risk cases, patient & relative counselling, and timely referral can prevent the incidence of this catastrophic surgery. Every obstetrician should learn to perform Obstetric hysterectomy. Judicious use of this skill can help in reducing the maternal morbidity and mortality.

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