Volume : 2 | Issue : 12 | December 2013 • ISSN No 2277 - 8179

Research Paper

Emergency Obstetric Hysterectomy: A Retrospective Study at a Tertiary Care Hospital

Medical Science

KEYWORDS : Emergency caesarean hysterectomy, ruptured uterus, post partum hemorrhage (PPH)

Dr. Jagruti M. Shah	Associate professor, Department of Obstetrics and Gynaecology, Smt. N.H.L. Medical College, Ahmedabad
Dr. Santwan B. Mehta	3rd year resident, Department of Obstetrics and Gynaecology, Smt. N.H.L. Medical College, Ahmedabad
Dr. Riddhi B. Shah	3rd year resident, Department of Obstetrics and Gynaecology, Smt. N.H.L. Medical College, Ahmedabad
Dr. Swati Thakkar	3rd year resident, Department of Obstetrics and Gynaecology, Smt. N.H.L. Medical College, Ahmedabad

ABSTRACT

Title: Emergency Obstetric Hysterectomy: A Retrospective Study at a Tertiary Care Hospital.

Objective: To determine the frequency, indications, maternal and perinatal mortality and morbidity associated with emergency obstetrics hysterectomy at a tertiary care hospital.

Methods: A retrospective analysis of 50 cases of emergency hysterectomies done for obstetric indications over a period of 3 years from April 2010 to March 2013, performed at V.S. General Hospital, N.H.L. Medical College, Ahmedabad, a tertiary care hospital, was done.

Results: The incidence of emergency hysterectomy in our study was 0.29% i.e. 1 in 339 deliveries. 60% of the women were in the age group of 26-35 years. 58% of patients belonged to parity three or four. Majority of the cases were unbooked (74%). Postpartum hemorrhage (44%) and ruptured uterus (38%) were the two major indications for obstetric hysterectomy. In 78% of the cases, total hysterectomy was performed. The maternal mortality was 10%.

Conclusion: Proper antenatal care and early referral are the only potential methods which can be used for preventing this catastrophic event. Moreover, timely decision, liberal blood transfusion and speedy surgery by an experienced clinician are the main pillars in the management of this life saving procedure.

Introduction

Emergency obstetric hysterectomy is the removal of uterus at the time of caesarean section, following caesarean section, immediately after vaginal delivery or in the period of puerperium in order to save maternal life. [1] The 1st successful obstetric hysterectomy was performed by

Eduardo Porro in 1876 in a 25years old primiparous dwarf, after caesarean section, who succeeded to survive post operatively 40days after the operation.[2]

Obstetric hysterectomy in developing countries is usually done when conservative measures fail to control the post partum hemorrhage.[2,3] In the past the most common indications were atonic uterus and ruptured uterus.[4] Recent reports show that abnormal placental adherents— placenta previa — is emerging as the major indication for obstetric hysterectomy and is most likely related to increase in the number of caesarean delivery over the past two decades.[4,5] As the number of caesarean sections is increasing, the number of scarred uteri is also increasing. This exposes the gravid women to increasing morbidity from uterine rupture, placenta previa and accrete, thus increasing the incidence of emergency obstetric hysterectomy. Emergency obstetric hysterectomy is associated with severe blood loss, intra-operative complications and significant postoperative maternal mortality and morbidity. The high incidence of maternal morbidity and mortality is reported from developing countries.[6] Obstetric hysterectomy can save many maternal lives, However, the decision to embark on this life-saving operation, especially in the younger age group and low parity could present a great dilemma to the surgeon, while the timely decision is crucial in averting catastrophes [8].

Aim:

The purpose of the present study was to determine the frequency, indications, maternal and perinatal mortality and morbidity associated with emergency obstetrics hysterectomy at a tertiary care hospital.

Materials and methods:

A retrospective analysis of 50 cases of emergency hysterectomies done for obstetric indications over a period of 3 years from April 2010 to March 2013, performed at V.S. General Hospital, N.H.L. Medical College, Ahmedabad , a tertiary care hospital, was done. Maternal characteristics (age, parity, booked or emergency case etc.), indications for hysterectomy, type of operation performed, problems encountered during operation and causes of maternal morbidity and mortality were studied.

Before embarking on this procedure, other conservative methods had been tried in an attempt to arrest the bleeding, emergency hysterectomy was carried out as life saving measure. The surgical procedure was performed by senior consultant.

Results :

Incidence

There were 50 cases of emergency hysterectomies amongst 16,935 deliveries during the period of study giving an incidence of 0.29% i.e. 1 in 339 deliveries.

Maternal Characteristics

a) Age – 60% of the women were in the age group of 26-35 years. (Table – 1) The youngest woman was of 23 years of age and the oldest was 39 years old.

Table 1 : Age

Age (years)	No. of Patients	Percentage
21-25	11	22
26-30	13	26
31-35	17	34
36-40	9	18
Total	50	100

b) Parity(Table – 2) – Only 5 women were primiparous. Majority of patient i.e. 58% belonged to parity three or four while 18% were grandmultiparas.

Volume : 2 | Issue : 12 | December 2013 • ISSN No 2277 - 8179

Table 2 : Parity

Parity	No. of Patients	Percentage
Para 1	5	10
Para 2	7	14
Para 3	17	34
Para 4	12	24
Para >=5	9	18
Total	50	100

c) Antenatal booking – 37 cases were not booked(74%) and 13 patients were booked (26%) for delivery

Indications
Postpartum hemorrhage (44%) and ruptured uterus(38%) were the two major indications for obstetric hysterectomy (Table 3).

Placenta previa(17) and prior cesarean section(14) were the significant high risk factors (Table 4). The commonest cause of post partum hemorrhage in our study was placenta previa. The commonest cause cause of ruptured uterus in our study was previous cesarean section.

Table 3 : Indications

Indication	No. of Patients	Percentage
Postpartum hemorrhage	22	44
(1)Ante partum Hemorrhage	19	38
(2) Others	3	6
Ruptured uterus	19	38
Morbidly adherent placenta	8	16
Broad ligament hematoma	1	2
Total	50	100

In placenta previa, the placenta is attached to the lower uterine segment which does not retract well after placental separation and this leads to the sinuses remaining open after delivery, causing postpartum hemorrhage (PPH). Operative intervention and a high incidence of adherent placenta are also contributing factors for PPH.

Table 4 : High Risk Factors

Postpartum hemorrhage (22)	Ruptured uterus (19)	Morbidly adherent placenta(8)
Placenta previa(14)	Previous LSCS (10)	Previous LSCS (4)
Accidental Hemorrhage (5)	Grand multipara (5)	Placenta previa(3)
Multiple pregnancy (2)	Accidental Hemorrhage (4)	History of D&E (1)
Uterine Inversion(1)	-	-

(Figures in bracket indicate numbers.)

Type of Operation
In 78% of the cases, total hysterectomy was performed and in others subtotal hysterectomy was performed. It is important to ligate the stumps doubly and carefully, as tissues are more vascular and edematous.

Additional surgical procedure
- Internal iliac artery ligation was done in 6 cases.
- Repair of a tear in the bladder was required in three cases.
- Blood transfusion(Blood and other components) were given to all the patients, ranging from 4-16 units.
- Maternal morbidity and mortality
- Obstetric hysterectomy, though it was performed to save the life of patients, is associated with innumerous complications as with any emergency surgery. Fever was commonest post operative complication (n=19), followed by wound infection (n=9) [Table 5].

Table 5 : Incidence of Maternal morbidity and mortality

Causes	No. of cases	Percentage
Febrile morbidity	19	38
Wound Infection	9	18
Bladder Injury	3	6
Paralytic ileus	3	6
Septicemia	2	4
Maternal Mortality	5	10

There were 5 maternal deaths (10%), two patients died of septicemic shock,other 2 had died of hypovolemic shock and 1 patient died of DIC following acute blood loss.

Discussion :
Cesarean hysterectomy still remains a necessary tool for the obstetrician. Knowledge of this operation and skill at its performance saves lives in catastrophic rupture of the uterus or intractable PPH.

Incidence of emergency hysterectomy in the present study was 0.29% which is similar to many other studies[1,3] because our institution is an important referral center in this region and most of our cases(74%) were referred from outside in moribund condition after complications occurred.

Table 6 : Comparative incidence of obstetric hysterectomy

Authors	No. of cases	Incidence
Anita & Kavita[3]	41	0.26%
Razia, Ayesha, Haleema,Shereen[1]	121	0.27%

PPH is the commonest indication for obstetric hysterectomy in our study (44%).

Ruptured uterus is the second most common indication in our study accounting for 38% of cases. Similar results have been reported by other authors[9,10].

The mortality amongst our patients was 10% comparable to other studies[10-12]

Postoperative shock, pyrexia, paralytic ileus, and wound infection were common complications. Prolonged labor, intrauterine manipulation and dormant sepsis probably account for these complications. These could be prevented by early referral of these cases to well equipped centers which can treat emergency obstetric cases promptly and efficiently.

Conclusion :
Obstetric hysterectomy is a life saving procedure but decision should be prompt and treatment by an experienced surgeon.

Every obstetrician should be trained to perform this procedure. Inspite of this life saving measure, there occur significant number of maternal deaths which can be prevented by good maternal care, active management of labor, early recognition of complications, timely referral, and easy availability of transport and blood transfusion facilities. Community education about advantages of institutional delivery or delivery by trained dais will save many such emergencies.

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