



Emergency obstetric hysterectomy

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OBJECTIVE(S) : To study indications and maternal outcome of emergency obstetric hysterectomy.

METHOD(S) : A retrospective study of the cases of emergency obstetric hysterectomy performed over a period of 7 years from 1997 to 2003 was done. Maternal characteristics, indications, and maternal morbidity and mortality were analyzed.

RESULTS : During the study period there were 41 emergency obstetric hysterectomies and 15,461 deliveries, giving an incidence of 0.26%. Majority of the cases were unbooked (75.6%). It was more common in para three and four (60.9%). Atonic post-partum hemorrhage and ruptured uterus were the common indications (78.04%). The maternal mortality was 9.7%.

CONCLUSION(S) : Emergency obstetric hysterectomy is a life saving procedure. The maternal outcome greatly depends on timely decision and good clinical judgment because unnecessary delay can cost life and undue haste can cause morbidity.

Keywords : obstetric hysterectomy, emergency obstetric hysterectomy

Introduction

In no other gynecological or obstetrical surgery is the surgeon in as much a dilemma as when deciding to resort to an emergency hysterectomy. On one hand it is the last resort to save a mother's life, and on the other hand, the mother's reproductive capability is sacrificed. Many times it is a very difficult decision and requires good clinical judgement. Most of the times the operation is carried out when the condition of the patient is too critical to withstand the risks of anesthesia or surgery. Proper timing and meticulous care may reduce or prevent maternal complications.

Material and methods

A retrospective analysis of 41 cases of emergency

hysterectomies done for obstetric indications over a period of 7 years from 1997 to 2003 was done. Maternal characteristics, indications for hysterectomy, and causes of maternal morbidity and mortality were studied. Hysterectomy for any indication during pregnancy, labor and perpeurium has been included. The study also included hysterectomies done for complications following pregnancy termination, such as perforation and sepsis. Each case record was analyzed in details with special emphasis on indication, demographic data (age, parity, booked or emergency case etc.), type of operation performed, problems encountered during operation, morbidity, and mortality.

Results

Incidence

There were 41 cases of emergency hysterectomies amongst 15,461 deliveries during the period of study giving an incidence of 0.26% i.e. 1 in 384 deliveries.

Maternal Characteristics

a) *Age* – Sixty-one percent of the women were in the age group of 26-35 years. (Table – 1) The youngest woman was of 22 years of age and the oldest was 39 years old.

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- b) *Parity* – Only five women were primiparous. Sixty-five percent belonged to parity three or four while 21.9% were grandmultiparas.
- c) *Antenatal booking* – Thirty cases were not booked (73.1%) and eleven booked (26.8%) for delivery

Table 1. Age (n=41).

Age (years)	No. of patients	Percentage
21-25	11	26.83
26-30	11	26.83
31-35	14	34.14
36-40	5	12.1
Total	41	100

Indications

Postpartum hemorrhage (41.46%) and ruptured uterus (36.58%) were the two major indications for obstetric hysterectomy (Table 2).

Table 2. Indications.

Indications	No. of patients	Percentage
Postpartum hemorrhage	17	41.46
Ruptured uterus	15	36.58
Morbidly adherent placenta	5	12.19
Septic abortion	2	04.87
Perforation during voluntary termination of pregnancy	1	02.43
Puerperal sepsis	1	02.43
Total	41	100

Antepartum hemorrhage (12/41) and prior cesarean section (7/40) were the significant high risk factors (Table 3). 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 3. High risk factors.

Post-partum hemorrhage (17)	Rupture uterus (15)	Morbidly adherent placenta (5)
Placenta previa (7)	Previous LSCS (7)	Previous LSCS (3)
Accidental hemorrhage (5)	Grandmultipara (3)	Placenta previa (1)
Prolonged labor (3)	Accidental hemorrhage (2)	History of retained placenta (1)
Multiple pregnancy (2)	Oxytocin abuse (1)	
	Prolonged labor (1)	
	Obstetric manipulation (1)	

Figures in bracket indicate numbers.

Type of Operation

In 62% of the cases, subtotal hysterectomy was performed. It is not always possible to do total abdominal hysterectomy as the patients' general condition is often poor. It is important to ligate the stumps doubly and carefully, as tissues are more vascular and edematous. Altered coagulation often contributes to more bleeding. In our study, three cases had excessive collection of blood in the abdominal cavity postoperatively in spite of the abdominal drain and required relaparotomy. In all of them the bleeding was from the raw surface. Two of them needed internal iliac artery ligation. In the third case, since internal iliac artery ligation was done during hysterectomy, the bleeding area was lightly packed with one end of the pack coming out from the incision. The pack was removed after 24 hours.

Additional surgical procedure

Internal iliac artery ligation was done in 12 cases. Repair of a tear in the bladder was required in three cases while in one case ureteric injury needed repair

Post Operative Complications

Table 4 shows that 39.02% of cases suffered from febrile morbidity.

There were four maternal deaths giving a maternal mortality of 9.7%. These were due to septicemia in one, DIC following acute blood loss in two and hypovolemic shock in one. There were 16 still births, 19 live births, and 3 neonatal deaths. There were two twin pregnancies. Two women had ruptured the uterus before fetal viability. Two women had hysterectomy for septic abortion, one of them for perforation during surgical termination of pregnancy.

Table 4. Complications and post-operative morbidity.

Causes	No. of cases	Percentage
Febrile morbidity	16	39.02
Wound infection	10	24.3
Septicemia	4	9.7
Paralytic ileus	3	7.3
Urinary tract infection	3	7.3
Bladder injury	3	7.3
Ureteric injury	1	2.4
Vesicovaginal fistula	2	4.8
Pneumonitis	2	4.8
Thrombophlebitis	1	2.4
Repeat laparotomy for bleeding	3	7.3

Some women had more than one morbidity.

Table 5. Comparative incidence of obstetric hysterectomy

Author	Incidence
Sturdee and Rushton (1986) ¹	0.07%
Ambiye and Venkatraman (1988) ²	0.12%
Radha et al (1991) ³	0.13%
Mantri et al (1993) ⁴	0.32%
Agashe and Marathe (1995) ⁵	0.056%
Allahabadia and Vaidya (1991) ⁶	0.19%
Gupta et al (2001) ⁷	0.26%
Sinha and Mishra (2001) ⁸	0.38%
Makherjee et al ⁹	0.15%
Kanwar et al (2003) ¹⁰	0.32%
Praneshwari Devi et al (2004) ¹¹	0.0779%
Present study	0.26%

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 0.26% which is higher than that in many other studies ¹⁻¹¹ (Table 5) because our institution is an important referral center in this region and most of our cases were referred from outside in moribund condition after complications occurred.

PPH is the commonest indication for obstetric hysterectomy in our study (41.46%). In a study by Agashe and Marathe ⁵ also, PPH was the commonest indication (60%). Ruptured uterus is the second most common indication in our study accounting for 36.58% of cases. Incidence reported by Mantri et al ⁴ is 67.2%, and by Ambiye and Venkatraman ²

67.8%. Allahabadia et al ⁶ reported a lower incidence of 20%.

The mortality amongst our patients was 9.7% comparable to 9.3% reported by Ambiye and Venkatraman ³. Mantri et al ⁴ reported 14% mortality and Allahabadia and Vaidya ⁶ 32%. Sturdee and Rushton ¹ reported no mortality in their series of 47 cases.

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.

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. In spite 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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