

A clinical review of emergency obstetric hysterectomy

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Abstract

Objective: To evaluate risk factors, incidence, indication, maternal and fetal outcome in patients undergoing emergency obstetric hysterectomy in a tertiary care center.

Materials and Method: It is a retrospective study of 40 cases in a tertiary referral teaching Hospital. All women who underwent Emergency obstetric Hysterectomy between Jan 2010 to Dec 2015 were included in the study conducted in the Department of obstetrics and gynecology, Shivamogga Institute of Medical Sciences, Shivamogga. The total number of deliveries during the study period was 48,102.

Results: 40 women underwent emergency obstetric Hysterectomy (0.083%) during the study period. Out of these, 12 women had vaginal delivery and 28 were delivered by caesarean section. 3 women were grand multipara and 8 were primipara. Majority of the women who underwent Emergency Obstetric Hysterectomy were second gravida. Atonic PPH, Adherent placenta, Rupture uterus, placenta previa, post B- Lynch uterine sepsis were the indications for Emergency obstetric Hysterectomy. All the women were admitted to the ICU for post operative care.

Conclusion: Emergency obstetric Hysterectomy is indeed a life saving procedure when used judiciously especially when patient fails to respond to medical line of management.

Keywords: Line of management, Emergency obstetric hysterectomy, Post partum hemorrhage, Hypovolemic shock.

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Introduction

Emergency obstetric Hysterectomy is defined as removal of the uterus either after vaginal delivery or during cesarean section or during postpartum period. It is a life saving surgery done when there is severe post partum hemorrhage not responding to conservative medical management. It is also done in rupture uterus, morbidly adherent placenta, placenta previa and placental abruption. Medical management of atonic uterus warrants use of either injection oxytocin by infusion, injection prostaglandin PGF₂ α IM, injection methergin IM, tablet misoprostol 600 μ gm either by oral, sublingual or perrectal administration. Non medical methods like condom catheter, intrauterine packing can also be effectively used to manage obstetric hemorrhage in hospitals with limited resources.⁽¹⁾ Uterine artery embolization is a recent modality of treatment in hospitals with advanced technology for interventional radiology.

In spite of the availability of the above methods occasionally a situation may arise where the relentless uterine bleeding necessitates hysterectomy. This is a trying situation for the Obstetrician as on one hand it is a lifesaving procedure, but on the other hand it puts an end to the woman's reproductive capability.

Post partum hemorrhage is the leading cause of maternal death contributing to one third of maternal deaths.⁽²⁾ Some recent studies are showing an increased trend in the rate of postpartum hemorrhage.^(3,4)

In this study a retrospective analysis of emergency obstetric hysterectomy done during the period ranging from January 2010 to December 2015 was evaluated.

Materials and Method

The study was conducted in Shivamogga Institute of Medical Sciences, Shivamogga, Karnataka, India. It is a retrospective analytical study.

All women who needed an emergency obstetric hysterectomy were included. Data analysis based on the details documented in the case records, operative notes and data collected from the medical records department. This study included women who delivered either in our hospital or those cases which were referred with pregnancy and postpartum complications.

The data was compiled with respect to age, parity, incidence, antenatal high risk factors if any, and most importantly fetomaternal outcome.

Results

Out of 48,102 deliveries during the study period, total of 40 women underwent emergency obstetric hysterectomy. The overall incidence was 0.8 per thousand deliveries.

Table 1: The mode of delivery in relation to emergency obstetric hysterectomy

	No of patients	EOH	Incidence
Cesarean section	16,836	28	0.16%
Vaginal delivery	31,266	12	0.03%
Total	48,102	40	0.08%

Out of the 40 women in the study, 28 women underwent hysterectomy following cesarean section. This implies that the incidence of emergency obstetric Hysterectomy is more in the cesarean group.⁽⁵⁾

Table 2: Parity and age distribution of women who underwent emergency obstetric Hysterectomy

Age	Parity					Total
	P1	P2	P3	P4	P5	
18-24	6	8	2	0	0	16
25-29	2	3	9	2	0	16
30-34	0	1	1	1	2	5
35-40	0	0	0	2	1	3
Total	8	12	12	5	3	40

Majority of the women who underwent emergency obstetric hysterectomy were young women aged between 18-29 years with parity ≤ 3 .

Table 3: Various indications for emergency obstetric hysterectomy

Indication	Number	Percentage
Atonic postpartum hemorrhage	24	60%
Adherent placenta	1	2.5%
Rupture uterus	7	17.5%
Placenta previa	2	5.0%
Abruptio placenta	3	7.5%
Post B –Lynch sepsis	3	7.5%
Total	40	100%

The incidence of emergency obstetric hysterectomy was maximum in the atonic postpartum hemorrhage group which was 60% in women who failed to respond to medical line of management.

Table 4: Maternal morbidity

Morbidity factors	Number	Percentage
Hypovolemic shock	19	47.5%
Coagulopathy	6	15%
Febrile morbidity	7	17.5%
Wound infection	5	12.5%
Injury to bladder	2	5%
Paralytic ileus	1	2.5%
Total	40	100%

All women who underwent emergency obstetric hysterectomy were admitted to intensive care unit and were treated appropriately. Nearly 50% of the women had hypovolemic shock.

Table 5: Fetal complications

Complications	Number	Percentage
NICU admission	14	35%
Mortality	8	20%
Total	22	55%

Note: More than 50% of the neonates in the study group needed admission to NICU.

Discussion

The first obstetric Hysterectomy was introduced to obstetric surgery by Eduardo Porro of Italy in 1876 in his effort to effect a lowering of the appalling death rate from cesarean section.⁽⁶⁾ Now with modification in surgical techniques, better anaesthetic and intensive care management, availability of blood and blood components and anti - microbial therapy the patient survival rate has improved drastically.^(1,2,3)

Indications for caesarean Hysterectomy include hypotonic uterus not responding to oxytocin, prostaglandins and uterine massage, laceration of the uterus and adnexa, placenta accrete or increta, placenta previa and abruptio placenta.⁽⁷⁾ Obstetric hysterectomy is especially indicated in spontaneous obstructive rupture, so common in the developing countries. Considering the low general condition and disturbed morbid anatomical changes near the cervico vaginal region, it is preferred to perform a quick subtotal hysterectomy.⁽⁸⁾ The incidence of emergency Obstetric hysterectomy in this study is comparable to other reported studies.^(9,10,11,12) The incidence of obstetric hysterectomy (0.083%) in the study as shown in table 1 was considerably less as compared to other studies.^(13,14,15)

As per most published series the commonest cause of emergency obstetric hysterectomy is adherent placenta followed by atonic PPH and uterine rupture. Earlier the most common indication of emergency obstetric hysterectomy was uterine atony and uterine rupture.^(16,17) In the present study as shown in Table 2 since majority of the women were Para 1, 2 or 3 with a relatively low incidence of cesarean section; but a high incidence of anemia and malnutrition, uterine atony was the leading factor for emergency obstetric hysterectomy. Better patient monitoring, efficient guidelines for vaginal birth after caesarean and increase in the lower segment cesarean sections as against classical scars has reduced incidence of rupture uterus.⁽¹⁸⁾

Table 3 shows the various indications for emergency obstetric hysterectomy. Atonic PPH contributed to 60%, followed by rupture uterus 17.5%

and Abruptio placenta and post B-lynch sutures 7.5% each. Placenta previa 5% and adherent placenta 2.5% were the other indications. This is similar to the scenario in most of the developing countries.⁽¹¹⁾

In this study all the women who were taken up for surgery underwent subtotal hysterectomy since it is faster, technically less complicated and there is less risk of ureteric injury and in a haemodynamically unstable patient, subtotal hysterectomy requires less operative time and is associated with lesser blood loss.

In our series nearly 50% of the cases presented with hypovolemic shock and 15% had coagulopathies in the peri-operative period.⁽¹⁹⁾ In spite of this, no mortality was reported in this study due to the availability of blood and blood components round the clock without delay.

In the post operative period febrile morbidity was the commonest complication. Wound infection was seen in 1/8 of the patients. Bladder injury when detected was dealt suitably at the time of the emergency obstetric hysterectomy. The incidence of bladder injury is comparable with that of Kore et al.⁽²⁰⁾

Conclusion

In developing countries where uterine atony contributes to a large number of cases of emergency obstetric hysterectomy, population based interventions like better nutrition of girl child, curbing teenage pregnancies, adequate spacing of pregnancies, institutional deliveries, reducing family size and prompt medical and surgical treatment like emergency Obstetric hysterectomy would go long way to decrease the maternal mortality and morbidity.

Identification of risk factors in the antenatal period monitoring of labour with partogram and active management of third stage of labour can reduce the incidence of emergency Obstetric hysterectomy.

The authors express their graduation to the Director, Shivamogga Institute of Medical Sciences, the faculty and staff of the department of obstetrics and gynaecology and to the MRU of the college.

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