

Frequency of Emergency Obstetric Hysterectomy in Patients Presenting at PMC Hospital Nawabshah

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ABSTRACT

Objective: To determine the frequency of emergency obstetric hysterectomy among pregnant patients presenting at PMC hospital Nawabshah

Study Setting: The study was conducted at Obstetrics & Gynecology Department, Peoples Medical College Hospital, Nawabshah.

Duration of Study: 10th February, 2021 to 09th August, 2021

Study Design: Descriptive study

Methodology: All 82 patients fulfilling the inclusion criteria were included in this study. All hysterectomies were performed after 24 week of gestation. We retrieved the proforma of all cases and emergency obstetric hysterectomy was done. The data were entered and analyzed in SPSS v25.0. Data were stratified for age, parity, socio-economic status, gravida, type of delivery, education status, booking status, BMI, booking status, diabetes mellitus (FBS >126mg/dl) and hypertension (BP >140/90mmHg) to address the effect modifiers. Chi-square test was used post-stratification with a p-value ≤0.05 considered as significant.

Results: Total 82 pregnant women of 20-45 years of age having gestational age ≥24 weeks were selected for this study. Mean age of the patients was 31.95±8.06 year. Among 82 women who underwent cesarean section or vaginal delivery, 4 (4.9%) had emergency obstetric hysterectomy.

Conclusion: Emergency obstetric hysterectomy is a necessary evil in obstetrics. Although it curtails the future child bearing potential of the woman, in many cases it saves the life of the mother. Most of its morbidity is attributable to its indications and underlying disorders rather than to the procedure itself.

Keywords: Emergency Obstetric Hysterectomy, C-section, Vaginal Delivery.

INTRODUCTION

Emergency obstetric hysterectomy though a lifesaving surgical procedure but is considered as risky operation in modern obstetrics. Over 500,000 women die each year due to complications of pregnancy and childbirth, a number that has remained relatively unchanged since 1990, when the first global estimates of the burden of maternal mortality were developed.¹ Hemorrhage due to uterine atony, adherent placenta and PPH are still the causes of maternal death in developing countries.²

Although advances have been made in the development of conservative medical and surgical treatment of obstetric haemorrhage, emergency peripartum hysterectomy remains a lifesaving procedure in the management of intractable haemorrhage unresponsive to conservative management.³ It is performed when all conservative measures have failed to achieve haemostasis, as a last resort to save a mother's life sacrificing the maternal reproductive capacity. With increase in the number of cesarean delivery; abnormal placental adhesions, placenta previa has emerged as the most common indication in developed countries.⁴

In developing countries most common indications is post-partum hemorrhage when conservative measures fail and ruptured uterus when other measures to control bleeding fails.⁵ Obstetric hysterectomy is associated with increased risk of intra operative and post-operative maternal morbidity and mortality.⁶ The incidence of obstetrical hysterectomy due to uterine atony is declining from 42% to 29%.⁷⁻⁸ Use of uterotonic and haemostatic agents, surgical technique like internal iliac artery ligation had probably decreased incidence of obstetric hysterectomy due to uterine atony. While the incidence due to abnormal placentation is increasing from 25% to 41%.⁹

In a study by Shirodker et al, there were 45 cases of emergency hysterectomies during the period of study giving an incidence of 0.16%.¹⁰ In developed countries, the reported incidence of emergency hysterectomy is below 0.1% of the total normal deliveries performed, while in developing countries, the incidence rates are as high as 1-5/1000 of all the deliveries performed.^{2,11} In another study, among deliveries, 1.19% had

emergency obstetric hysterectomies.¹² In another study, among deliveries, 8.3% had emergency obstetric hysterectomies.¹³

The indications for obstetric hysterectomy kept changing with passage of time. Knowledge of this operation and skills in its performance can save many lives. The purpose of this study is to review the frequency of emergency obstetric hysterectomy and to provide guidelines for residents who may not been exposed to this procedure.

MATERIALS AND METHODS

This descriptive cross-sectional study was conducted at Obstetrics & Gynecology Department, Peoples Medical College Hospital, Nawabshah, during from the period 10th February, 2021 to 09th August, 2021. Total 82 pregnant women undergoing cesarean section or vaginal delivery were enrolled. Patients ages were ranging between 18 to 45 years. Women who delivered before 36 weeks of gestation, women undergoing hysterectomy for indications other than obstetric, women outside the stipulated time of 42 days post delivery, and those not giving consent were excluded. Fulfilling the inclusion criteria were included in this study after explaining merits and demerits of the treatment with fully written informed consent. All hysterectomies were performed after 24 week of gestation.

The proforma was analyzed for age, BMI, parity, socio-economic status, gravida, type of delivery, education status, booking status, diabetes mellitus (FBS >126mg/dl) and hypertension (BP >140/90mmHg) to address the effect modifiers. All the data were collected through a pre-designed proforma (attached).

The data were entered and analyzed in SPSS v25.0. Quantitative variable like age, weight, height and BMI were presented as Mean±S.D and if data not normally distributed, median was calculated. Qualitative variables as emergency obstetric hysterectomy, parity, socio-economic status, gravida, type of delivery, education status and booking status were presented as frequency and percentage. Data were stratified for type of delivery. Chi-square test was used post-stratification with a p-value ≤0.05 considered as significant.

RESULTS

Mean age of the patients was 31.95±8.06 year. Mean gestational age of the patients was 36.31±5.64 weeks. Mean BMI was 27.59±5.71 kg/m². According to antenatal care, 28(34.1%) were booked and 54(65.9%) were un-booked. According to gravida distribution, 4(4.9%) were nulligravida, while 26(31.7%) and 52(63.4%) were primigravida and multigravida respectively. According to parity distribution, 15(18.3%) were nulliparous, while 24(29.3%) and 43(52.4%) were primiparous and multiparous respectively. Among patients, 19(23.2%) were diabetic, 10(12.2%) were hypertensive. (Table 1)

Table 1: Baseline details of all the included patients

Variables	Frequency No.	%age
Mean Age (Years)	31.95±8.06	-
Gestational Age (weeks)	36.31±5.64	-
Mean BMI (kg/m)	27.59±5.71	-
Antenatal care		
Booked	28	34.1
Un-booked	54	65.9
Gravida		
Nulligravida	4	4.9
Primigravida	26	31.7
Multigravida	52	63.4
Parity		
Nulliparous	15	18.3
Primiparous	24	29.3
Multiparous	43	52.4
Diabetes mellitus		
Yes	19	23.2
No	63	76.8
Hypertension		
Yes	10	12.2
No	72	87.8

According to the mode of delivery, 39(47.6%) had c-section and 43(52.4%) had vaginal delivery. (Figure 1)

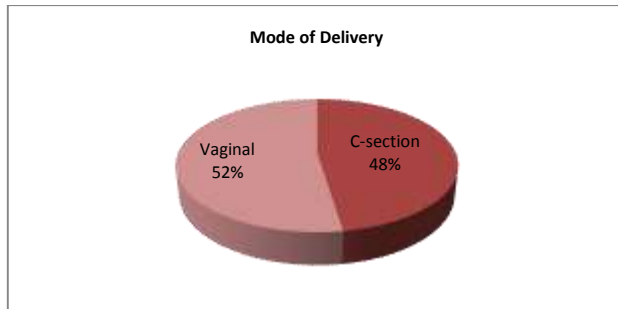


Figure 1: Mode of Delivery

Among 82 women who underwent cesarean section or vaginal delivery, 4 (4.9%) had emergency obstetric hysterectomy. (Figure 2)

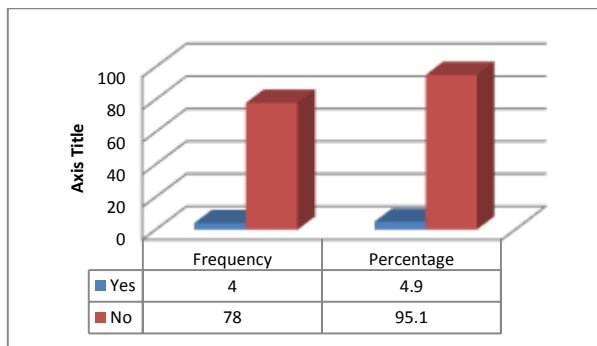


Figure 2: Frequency of Hysterectomy

According to stratification of emergency obstetric hysterectomy with respect to mode of delivery, significant difference was noted between mode of delivery for emergency obstetric hysterectomy (p<0.05) (Table-2).

Table 2: Stratification of emergency obstetric hysterectomy with respect to mode of delivery

Mode of delivery	Emergency obstetric hysterectomy		Total	p-value
	Yes	No		
C-section	4 10.3%	35 89.7%	39 100.0%	0.031
Vaginal birth	0 0.0%	43 100.0%	43 100.0%	
Total	4 4.9%	78 95.1%	82 100.0%	

DISCUSSION

Storer performed the first hysterectomy in the United States in 1869.¹⁴ Soon thereafter, Porro of Milan described the first hysterectomy in which the infant and mother survived. As a mark of honor, the procedure is frequently referred to as the Porro operation. Hysterectomy traditionally is classified as elective for the management of incidental diseases like cervical intraepithelial neoplasia (CIN), or for the purpose of sterilization, and in cases of emergency to control intractable hemorrhage.¹⁴

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 post-partum hemorrhage requiring hysterectomy primarily due to the changed settings in which postpartum hemorrhage presents itself in modern obstetrics.¹⁵

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 cesarean section attributable, in part, to patient preferences and medico-legal implications on medical fraternity.¹⁵

Additionally, advances in anesthesia, blood bank facilities, and intensive care back-up have made it a safer and painless alternative to labor. 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 hemorrhage.

This is why emergency obstetric hysterectomy has become increasingly relevant in modern obstetric practice. An analysis of patient discharge notes in Canada has revealed a rise in the rate of postpartum hemorrhage necessitating hysterectomy.¹⁵

The incidence of emergency obstetric hysterectomy in our study was 4.9%, which is similar to that reported from Columbia¹⁶ (4.08%) and the US¹⁷ (5.06%). It is considerably lower than that reported in Nigeria¹⁸ (7.51%), China¹⁹ (5.22%), Pakistan²⁰ (5.27%), and another study from India¹⁵ (6.52%). This can be attributed to the fact that our study looked at a centrally located urban center, which caters to a higher proportion of booked cases with institutional deliveries rather than referred cases.

The greater association of emergency obstetric hysterectomy with cesarean delivery compared to normal vaginal delivery in our study (10.3% vs. 0%) is similar to studies from China¹⁹ (90.1% vs. 6.5%), Turkey²¹ (0.078% vs. 0.016%), and another from India²² (0.79% vs. 0.24%). This apparently obvious association has socially relevant implications.

The incidence of obstetrical hysterectomy due to uterine atony is declining from 42% to 29%.⁷⁻⁸ Use of uterotonic and haemostatic agents, surgical technique like internal iliac artery ligation had probably decreased incidence of obstetric hysterectomy due to uterine atony. While the incidence due to abnormal placentation is increasing from 25% to 41%.⁹

In a study by Shirodker et al, there were 45 cases of emergency hysterectomies during the period of study giving an incidence of 0.16%.¹⁰ In developed countries, the reported incidence of emergency hysterectomy is below 0.1% of the total normal deliveries performed, while in developing countries, the

incidence rates are as high as 1-5/1000 of all the deliveries performed.^{2,11}

In another study, among deliveries, 1.19% had emergency obstetric hysterectomies.¹² In another study, among deliveries, 8.3% had emergency obstetric hysterectomies.¹³ Improving general awareness regarding the long-term morbidity associated with cesarean sections can help reduce requests of 'section on demand' and may prove life saving for many women in the long run.

CONCLUSION

Emergency obstetric hysterectomy is a necessary evil in obstetrics. Although it curtails the future child bearing potential of the woman, in many cases it saves the life of the mother. Most of its morbidity is attributable to its indications and underlying disorders rather than to the procedure itself. Training postgraduate trainees in this rare skill can prove lifesaving in situations where expertise or facilities for newer modalities of management, such as uterine artery embolization, do not exist, or fail. Rising rates of cesarean section and multiple pregnancies are bound to increase the incidence of emergency obstetric hysterectomy in the future.

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