Original Article

Clinical Audit of Obstetrical Hysterectomies for a Period of One Year in A Tertiary Care Hospital

Farzana Latif,[1] Sadia Ilyas,[2] Saeed Mehmood,[3] Hammad Arif,[4] Nuzhat Parveen Khawaja,[5] Zobia Jawad[6]

Abstract

Objectives: To audit the obstetric hysterectomies in a tertiary care hospital during one year.

Methods: It was an observational retrospective study design, where all the pregnant women were assessed for fetomaternal outcomes, indications and complications for peripartum hysterectomy. The records were retrieved from Jan 2015 to Dec 2015 by using hospital record system. The study duration was of one year. The venue of the study was Lahore General hospital, Lahore. The exclusion criteria included all unmarried women, women with chronic kidney disease or renal failure, past surgical history of heart disease, whereas all the women who delivered in hospital, private clinic or at home after atleast 28 weeks of gestational age and experience hysterectomy at the time of delivery or after delivery in the puerperium, were included in the study.

Results: The data over 32 women were retrieved from the hospital record system. The mean age of the women was 30.34+2.23 with range 26-34. The average number of parity was 3 of all females. The range of parity was 2 to 7. The average gestational age was 36.18 weeks. All the deliveries were done by cesarean section whereas 4 (12.5%) were elective and 28 (87.5%) were with emergency indications. 13 (40.6%) of the deliveries were in private clinic, 9 (28.1%) were done by LHV/ mid wife, 5(15.6%) were in private hospitals, 4(12.5%) were in LGH and only 1(3.1%) was at home. 18(56.3%) of the women were having at least one abortion in previous history.

Conclusion: We concluded that emergency peripartum hysterectomy is very vital procedure that saves lives and manage life threatening obstetrical hemorrhage when other methods failed to control it.The major indications for emergency peripartum hysterectomy were placental abruption, placenta praevia/accrete, uterine atony and ruptured uterus.

Key Words: Uterine artery embolization, Emergency peripartum hysterectomy, maternal morbidity and mortality, healthcare providers

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Introduction

The surgical removal of the uterus either at the time of cesarean section or subsequent vaginal delivery, or within the puerperium period is known as Emergency peripartum hysterectomy. Mainly it is performed due to insistent and life threatening obstetric hemorrhage. Emergency peripartum hysterectomy can be rightly categorized as a near miss event. This is very vital to highlight the events as it explains the standards of healthcare providers and also assist to reduce the maternal morbidity and mortality. In 1876, the first cesarean hysterectomy was termed by Eduardo Porro of Milan for PPH resulting live baby and mother.[1] The leading cause is uterine atony (UA) in developing countries and abnormal placentation in developed countries. It is published and observed a change of trend in epidemiology in several studies.[2] Previously uterine atony and rupture were major indications of emergency peripartum hysterectomy which are now replaced by abnormal placentation that is caused by high cesarean section rate all over the world. Commu-

1. Farzana Latif
2. Sadia Ilyas
3. Saeed Mehmood
4. Hammad Arif
5. Nuzhat Parveen Khawaja
6. Zoobia Jawad

1,3,6. *Department of Gynae & Obst. Postgraduate Medical Institute/ AMDC/Lahore General Hospital, Lahore,*
2. *Department of Gynae & Obst. Lahore Medical & Dental College, Lahore,*
4. *Department of Peads, Lahore General Hospital, Lahore,*
5. *Department of Gynae & Obst. Postgraduate Medical Institute/AMDC, Lahore,*

Correspondence:
Dr. Farzana Latif, *Associate Professor, Postgraduate Medical Institute/ AMDC/Lahore General Hospital, Lahore.*
Email:farzanahammad1@gmail.com

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nity based use of oxytocin, misoprostol, condom catheter balloon, and non-inflatable anti-shock garments for the hypovolemic shock management, B-lynch sutures, uterine artery and internal iliac artey ligation which termed as conservative medical and surgical methods has been supported effectively to control and manage the obstetric hemorrhage.[3] An option of uterine artery embolization was possible due to innovation in interventional radiology.[4] An increased risk of abnormal placentation and emergency peripartum hysterectomy was connected in various studies with previous uterine scar.[2] Literature review showed that the incidence of emergency peripartum hysterectomy ranges between 0.24 to 5.09 per thousand deliveries worldwide.[5] In comparison to non-obstetric morbidity and mortality, peripartum hysterectomy being an unplanned and emergency is associated with significant high rates.[6] The perfection in traditional methos of postpartum hemorrhage (PPH) and blood transfusion facilities has improved the outcome.[4] The main aim of study was to audit the obstetric hysterectomies in a tertiary care hospital during one year of time.

Methods

It is an observational retrospective study design, where all the pregnant women were assessed for feto-maternal outcomes, indications and complications for peripartum hysterectomy. The records were retrieved from Jan 2015 to Dec 2015 by using hospital record system. The study duration was of one year. The venue of the study was Lahore General hospital, Lahore. The exclusion criteria include all unmarried women, women with chronic kidney disease or renal failure, past surgical history of heart disease whereas all the women who delivered in hospital, private clinic or at home after at-least 28 weeks of gestational age and experienced hysterectomy at time of delivery or afterwards within the defined period of puerperium, were included in the study. The retrieved information contained demographics along with diagnostic history of all the pregnant women. Ethical Committee of the hospital approved the study. Statistical analysis: The collected data was electronically stored & analyzed by using SPSS version 20. Descriptive statistics were applied to calculate mean and standard deviation. Frequency distribution and percentages were calculated for qualitative variables like indication of caesarean section etc . A P-values less than 0.05 was considered statistically significant.

Results

The data of 32 women were retrieved from the hospital record system. The mean age of the women was 30.34+2.23 with range 26-34. The average number of parity was 3 of all females. The range of parity was 2 to 7. The average gestational age was 36.18 weeks. All deliveries were done by cesarean section whereas 4(12.5%) were elective and 28(87.5%) were with emergency indications. The detailed summary for previous scar uterus is given below in figure.

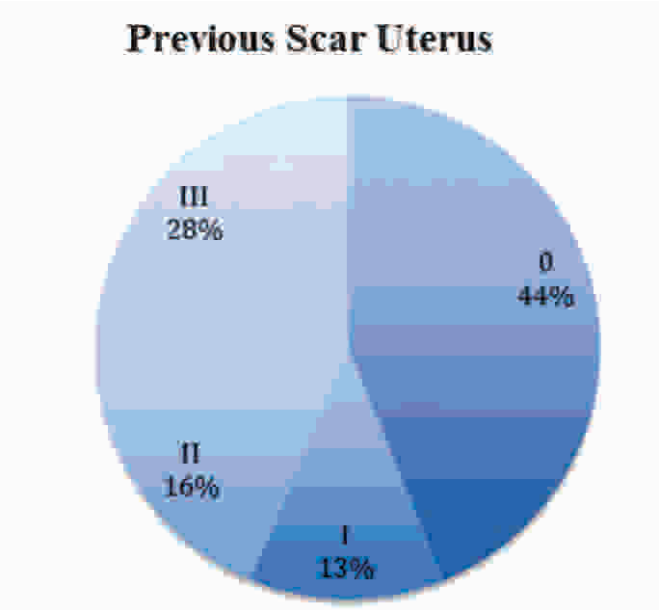

Figure 1 : *Summary of Previous Scar Uterus*

13 (40.6%) of the deliveries were in private clinic, 9 (28.1%) were done by LHV/ mid wife, 5(15.6%) were in private hospitals, 4(12.5%) were in LGH and only 1(3.1%) was at home. 18(56.3%) of the women were having at least one abortion in previous history.

Table 1: *Summary of the Complications*

Complications	
Hemorrhage	29(90.6%)
DIC	8(25.0%)
Bladder Injury	11(34.4%)
Intestinal Injury	1(3.1%)
Ureteric Injury	1(3.1%)
Maternal Injury	1(3.1%)
DVT	1(3.1%)
Maternal death	3(9.4%)
Hemorrhage	6(18.8%)
Reopening due to hemorrhage	1(3.1%)
Wound infection/ sepsis	16(50.0%)
Pelvic Abscess	1(3.1%)

The complications observed in all mothers were summarized in **Table 1**.

Discussion

The study was planned to audit the obstetrical hysterectomies at a tertiary health care level. We not only report baseline characteristic for the patients but also the indication for hysterectomies along with its complications arisen as well. Inspite of advancement in surgery and medicine fields, PPH remains the prominent reason of maternal morbidity and mortality. To treat the life threatening obstetric hemorrhage, emergency peripartum hysterectomy is performed, because controlling with conventional methods is difficult. The reported incidence of emergency peripartum hysterectomy ranges between 0.24 and 5.09 per 1000 deliveries.[5] The incidence reported in our study is supported by the above literature and other published studies.[7-8] We observed in our study that majority of the cases were with poor access to the healthcare. We also reported in our study the major indications of emergency peripartum hysterectomy which were abnormal placental localization, uterine atony and uterine rupture. We also observed in our findings the cases with adherent placentation; the percentages were supported by other published studies.[8-9] Due to previous history of cesarean section, adherent placentation become among one of the commonest indications. The study held by Kwee et al.,testified that both previous cesarean section and cesarean section in key pregnancy were associated with significant increased risk of emergency peripartum hysterectomy.[2] The effort to discrete the adherent placenta can bring a massive hemorrhage. A timely decision to go with hysterectomy can lead to improved outcomes.[2] We reported in our study the majority of the cases with multipara who underwent emergency peripartum hysterectomy. This finding is supported with other previously published studies.[10-11] Among hysterectomy performed the majority of type was subtotal hysterectomy. The percentages available in literature ranges among 53-80%.[11] It is presumed that this type of hysterectomy involved with less blood loss, lessening the operative time and less complication in comparison to other types. Our study reported the risk factors like multiparity, placenta previa, previous cesarean section, and cesarean in index pregnancy. Other published studies available with similar risk factors.[2,12] We also have observed three maternal deaths in our study as a complication. Other emergency peripartum hysterectomy complications including mortality were studied and analyzed by Machado LS et al,[1] Contrary to our study he claimed the maternal morbidity ranging between 26 to 31% and the commonest was blood transfusion requirement and urinary tract injury.

Conclusion

We concluded that emergency peripartum hysterectomy is very vital procedure that saves lives and manage life threatening obstetrical hemorrhage when other methods failed to control. The major indications for emergency peripartum hysterectomy were the abnormal placental localization, uterine atony and uterine injury or rupture.

Conflict of Interest: None

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Author's Contribution

LF: Data analysis, computing, writing
IS, AH: Data collection
MS: Computing, interpretation of data
JZ: Data collection