Peripartum Hysterectomy in A Tertiary Care Hospital

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Abstract

Objective: To identify the indications and risk factors associated with EPH so they can be timely diagnosed and managed to help to improve the maternal morbidity and mortality.

Methods: The study design opted for the present research was observational retrospective, where the pregnant women were assessed for various demographic characteristics, indications, high risk factors and maternal and fetal outcome. All the pregnant women who underwent caesarean hysterectomy were included in the study period from oct 2010 to oct 2014 and January 2017 to December 2017. All the data was filled on a predesigned Performa after taking consent from the patient. This study was carried out in Gynae unit 1, Sir Ganga Ram Hospital Lahore.

Results: The mean age of the women was 25.8 years.59 (66.29%) of the females were in the age category of 21 to 30, whereas 23 (25.84%) belong to 31-35 years of age and 7(7.86) were in the age group 36 to 40. The maximum number of parity was of 4 to 6 ,61.19%. Majority of the deliveries 92.13 were done by cesarean section (CS).

Conclusion: EPH is very vital procedure that saves lives and manages life threatening obstetrical hemorrhage when other methods failed to control bleeding. This procedure most of time is unforeseen and compulsory, however the timely decision of EPH procedure may improve the maternal outcome and hence help in decreasing maternal mortality.

Key words: Emergency peripartum hysterectomy (EPH), placenta previa, uterine rupture, maternal morbidity and mortality, healthcare providers

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Introduction

The removal of the uterus either at the time of cesarean section (CS) or after vaginal delivery, or within the puerperium period is known as Emergency peripartum hysterectomy (EPH). It is a life saving procedure and is done in the face of persistent and life-threatening obstetric hemorrhage when all conservative measures fail.[7,8,9,10] EPH 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 assist to improve the maternal morbidity and mortality. In 1876, the first cesarean hysterectomy was done by Eduardo Porro of Milan for PPH resulting in live baby and mother. The worldwide incidence of peripartum hysterectomy is around 1 per 1000 deliveries, being higher among low-income countries. This rise in incidence in developing countries may be due to decreased availability and lack of antenatal services especially in rural areas. The leading cause still 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. Uterine rupture is now replaced by abnormal placentation that is caused by high rate of caesarean section in the world. Community based use of misoprostol, oxytocin,

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condom catheter balloon, and noninflatable anti-shock garments for the management of hypovolemic shock, B-lynch sutures, uterine artery and internal iliac artery ligation which are termed as conservative medical and surgical methods have been supported effectively to control and manage the obstetric hemorrhage. An option of uterine artery embolization is also available in some selected center's possibly due to innovation in interventional radiology.[1] An increased risk of abnormal placentation and EPH was related in various studies with previous uterine scar. It is published in literature that the incidence of EPH ranges between 0.24 to 5.09 per thousand of deliveries worldwide. In comparison to non-obstetric morbidity and mortality, peripartum hysterectomy being an unplanned and emergency procedure is associated with significant high risks of complications.[2] Although life saving but is associated with devastating outcomes like injury to surrounding structures especially bladder and bowel, need for multiple blood transfusions and associated blood reactions and anesthetic and ICU complications along with a high rate of maternal morbidity and mortality.[1,7,8,9,10] perfection in traditional methods of postpartum hemorrhage (PPH) management and blood transfusion facilities has improved the outcome.[1] The main aim of study was to assess the changing trends in peripartum hysterectomy.

Material and Methods

The study design opted for the present research was observational retrospective, where the pregnant women were assessed for various demographic characteristics, indications, high risk factors and maternal and fetal outcome. The study duration was of 5 years. The venue of the study was Gynae Unit 1, Sir Ganga Ram Hospital Lahore which is a 680 bedded tertiary care hospital. All the women who deliver at hospital after 28 weeks of gestational age and experienced hysterectomy at the time of delivery or afterward within the defined period of puerperium were included in the study. The retrieved information contains demographics along with diagnostic history of all the women.

Results

Total number of deliveries in five years were 30'762, SVDs were 17'444 and caesarean sections were 13,318 and total no of caesarean hysterectomies were 89. The mean age of the women was 25.8yrs with range 21-30 (66.29%) in 59 patients, whereas 23 (25.8%) belong to 31-35 years of age, while 7,7.86% belongs to 36 to 40 years. 48 women (53.93%) were of gestational age 28-36 weeks, 38 (42.69%) were of gestational age 37-41 weeks while 3 women (3.37%) were above 41 weeks. 27 (30.33%) women were of parity 1-3, 55 (61.79%) were of parity 4-6 while 7 (7.86%) were of parity above 6. (30.33%) women were of parity 1-3, 55 (61.79%) were of parity 4-6 while 7 (7.86%) were of parity above 6.

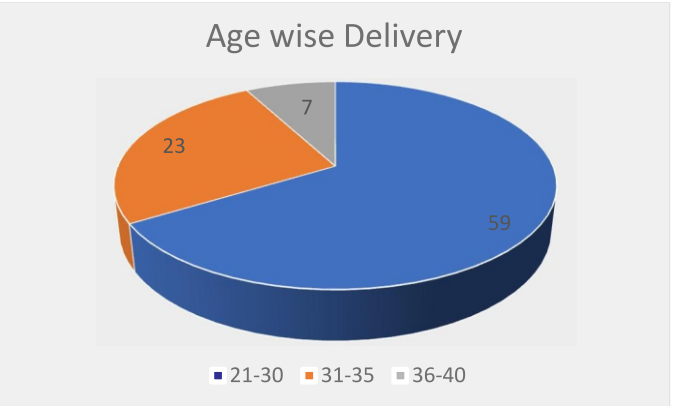

Figure 1: *Age wise Delivery*

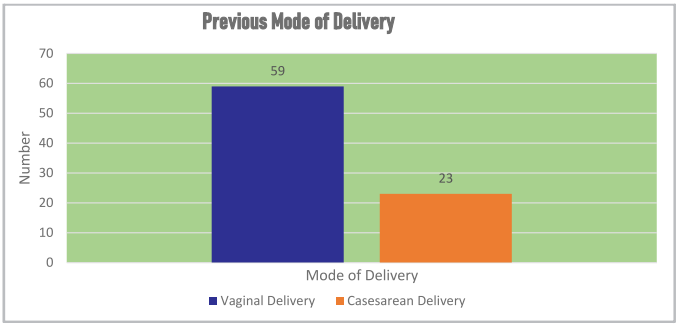

Figure 2: *Previous Mode of Delivery*

Table 1: *Indications for peripartum hysterectomy*

Indications For Peripartum Hysterectomy	Number	Percentage
Uterine atony	14	75.73
Placenta Accreta	24	26.96
Placenta Increta	28	31.46
Placenta Percreta	7	7.86
Placenta bed bleeding	11	12.5
Uterine rupture	5	5.61

Table 2: *Indications for Caesarean delivery*

Indications	Number	Percentage
Placenta previa plus previous surgery	58	65.16
Previous surgery	17	19.10
Antepartum hemorrhage due to placenta previa	8	8.98
Rupture uterus	2	2.24
Fetal distress	3	3.37
Fetal malpresentation	1	1.12

Table 3: *Perioperative morbidity and mortality*

Intraoperative Complications	Number	Percentage
Bladder injury	26	18.84
Blood transfusions	89	64.50
Broad ligament hematoma	4	2.89
ICU admission	7	5.07
Pulmonary edema	7	5.07
Wound disruption	5	3.62

Discussion:

The study was planned to determine the trends in peripartum hysterectomy among delivering mothers. We not only report various types of hysterectomy but also highlight the indications for hysterectomy and CS along with complications arising in intraoperative and postoperative period. Despite of advancement in surgery and medical fields, PPH remains the prominent cause of maternal morbidity and mortality. To treat the life-threatening obstetric hemorrhage EPH is performed because controlling with conventional methods is sometimes difficult. The incidence reported of EPH ranges between 0.24 and 5.09 per 1000 deliveries. The incidence reported in our study is supported by the above literature and other published studies. We observed in our study that majority of the cases were with poor access to the healthcare. We also reported in our study that major indication of EPH was abnormal placentation, uterine atony, and uterine rupture. We also observed in our findings the increased cases with adherent placentation; the percentages were supported by other published studies3. Due to previous history of CS, adherent placentation become among one of the commonest indications. A study done in Dublin also showing that indication of hysterectomy changing from uterine rupture from 40.5% to 9.3% and increase in morbidly adherent placenta from 5.4% to 46.5% due to increase in previous caesarean section rate. The study held by Kwee et al. testified that both previous CS and cesarean section in key pregnancy were associated with significant increased risk of EPH. The effort to separate the adherent placenta can cause massive hemorrhage. A timely decision to go with hysterectomy can lead to improved outcomes. We reported in our study most of the cases with multipara who underwent EPH. This finding is supported by other published studies.4 Among hysterectomy performed, most of the type was total hysterectomy. The percentages available in literature ranges among 53-80%.4 It is presumed that this type of hysterectomy involved lesser 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 quote with similar risk factors.5 Fortunately, we never observed any maternal mortality in our study. Moreover, the EPH complications were also studied and analyzed by Machado LS et al. Contrary to our study he claimed the maternal morbidity ranging between 26 to 31% and the commonest complication was blood transfusion requirement and urinary tract injury. Similarly, in some studies, the incidence of Eph reported is quite low as compared to other studies. For example, as in North India they carried 56 Eph in 8 years, the increasing incidence in tertiary care hospitals like ours is due to more referrals of high-risk cases especially with low lying placenta and multiple caesarean sections. The increased number of caesarean section is also alarming, especially increasing the need to focus on the decision of doing caesarean in primigravida patients and patients with previous one.2

Conclusion

We may conclude that EPH is very vital procedure that saves lives and manage life threatening obstetrical hemorrhage when other methods failed to control bleeding. This procedure most of time is unforeseen and compulsory however the increasing frequency in young patients and abnormal placentation needs a serious review of indications of caesarean section especially in primigravida's and also the improvement in expertise in caesarean hysterectomy, thus the expectancy of risk factors can be reduced with the timely decision of EPH procedure, and it will help in improving maternal mortality and will improve the maternal and fetal outcome.

Conflict of Interest *None*

Funding Source *None*

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Authors Contribution

SAR: Conceptualization of Project
SAR: Data Collection
SAR, SN, MAB: Literature Search
SAR: Statistical Analysis
SAR, SN, MAB: Drafting, Revision
SAR: Writing of Manuscript