

Peripartum Hysterectomy, a Continuing Cause of Maternal Morbidity A Two Years Retrospective Study

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Abstract:

Background: Emergency peripartum hysterectomy remains a morbid procedure with high operative and postoperative complications.

Objective: The aim of the study was to analyze the frequency, risk factors and maternal morbidity and mortality associated with peripartum hysterectomy.

Method: This was a retrospective study carried out at department of gynaecology and obstetrics unit-I LUMHS over a two years period from January 2011 to December 2012. All cases of peripartum hysterectomy at our unit were included in the study while the women who were referred to our unit after peripartum

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hysterectomy outside the place of study were excluded from the study.

Results: There were 29 cases of peripartum hysterectomy among 6200 deliveries. Frequency of peripartum hysterectomy was 0.46%. The mean age of the patients was 31 years with a range of 18-42 years. The range of parity was 0-14. The median parity was 7. The most common indication for peripartum hysterectomy was rupture uterus 13 (44.82%), followed by uterine atony in 9 (30%), morbidly adherent placenta in 5 (16.66%) and extension of lower segment incision in 2 patients (6.66%). Maternal mortality was found in 3 (10%) of patients.

Conclusion: The emergency peripartum hysterectomy remains a morbid procedure with high operative and postoperative complications.

Key words: Peripartum hysterectomy, PPH, Maternal morbidity

Introduction

Postpartum hemorrhage is one of the leading causes of maternal morbidity and mortality worldwide.^{1,2} When severe obstetric hemorrhage has failed to respond to other treatment, peripartum hysterectomy is usually performed.³ Peripartum or obstetric hysterectomy is defined as the removal of the corpus uteri alone or with the cervix at the time of a caesarean section or shortly after a vaginal delivery.⁴ The removal of the uterus at caesarean section is referred to as caesarean hysterectomy while the removal after vaginal birth is called postpartum hysterectomy.⁵

It has an incidence ranging from 1-4 per 1000 caesarean sections, significantly greater than that for vaginal delivery.⁶ The leading indications for peripartum hysterectomy include invasive placentation and uterine atony.⁸ The rate of caesarean delivery has risen dramatically, the most important risk factor for invasive placentation is the number of prior caesarean deliveries.⁹

Risk factors for uterine atony have also become more prevalent among pregnant women including advanced maternal age¹⁰, hypertensive diseases of pregnancy, labour inductions¹²,

and caesarean delivery.¹³ The high incidence of peripartum hysterectomy is being reported from developing world while developed countries generally report lower rates.^{14,15}

The high incidence of peripartum hysterectomy in the developing world may be due to the lack of adequate cross matched blood and other blood products which limit the time available for examining the effectiveness of other conservative procedures.^{14,16} Moreover, certain modern conservative procedures involving interventional radiology are not practicable in most developing world settings due to lack of human and material resources involved.¹⁴

Methodology

This was a retrospective study carried out at department of gynaecology and obstetrics unit-I of LUMHS over a period of 2 years from January 2011 to December 2012. Main outcome measures were frequency, risk factors and maternal morbidity and mortality associated with caesarean hysterectomy. Detailed chart review of all cases of peripartum hysterectomy was done including obstetrical history, details of index pregnancy and indications for peripartum hysterectomy. Patients who came after caesarean hysterectomy performed outside the place of study were excluded from the study. Case records of 29 patients who underwent caesarean hysterectomy were collected. All the information was recorded in the proforma for every patient. Data was compiled and analyzed for descriptive statistics using SPSS Version-16.

Results

Over the study period among 6200 deliveries, there were 29 cases of peripartum hysterectomy, the frequency was 0.46%. The mean age of the patients was 31 years. The range of parity was 0-14. The median parity was 7.

The mean gestational age was 37 weeks. History of previous caesarean section was found in 13 patients. Most of the patients belonged to poor socioeconomic class and were unbooked 22(73.33%). The most common indication for caesarean hysterectomy was rupture uterus in 13 patients (44.83%) followed by uterine atony in 8(27.59%). Morbidity adherent placenta in 5(17.24%) and extension of lower segment tear into the broad ligament in 3(10.34%).

Total hysterectomy was performed in 6(20.68%) patients while in 23(79.31%) was subtotal.

The perioperative morbidity included urinary bladder injury in 3(10.34%), retroperitoneal haematoma 1(3.44%), extension of tear into broad ligament 2(6.89%) coagulopathy 1(3.44%), ICU admission 3(10.34%), pulmonary edema 2(6.89%), reexploratory lapratomy 2 (6.89%), wound infection 3(10.34%), acute renal failure 2 (3.44%), DIC 2(6.89%), vault haematoma 1(3.44%), febrile illness in 5(17.24%).

Anemia was found in 25(86.2%) blood transfusion was required in all 29 patients (100%). In adequate availability of blood not only contributed to postoperative anemia but it was the also the major contributory factor in cases of maternal deaths.

No complications was found in 9 (31.03%) patients. Maternal death occurred in3 (10.34%) patients.

Age in years	Prevalence	Percentages
18-22	03	10.34
23-27	04	13.79
28-32	07	24.15
33-37	13	44.83
38-42	02	6.89
Parity		
0-2	02	6.89
3-5	05	17.25
6-8	11	37.93
9-11	08	27.59
12-14	03	10.34

Anenatal care booking status		
Booked	7	24.14
Unbooked	22	75.86
Previous mode of delivery		
Caesarean section	13	44.83
Vaginal delivery	16	55.17

Tables-1: Profile of the Patients (N=29)

Indication for peripartum hysterectomy	Prevalence	Percentages
Rupture Uterus	13	44.83
Uterine atony	8	27.59
Morbid adherent placenta	5	17.24
Extension of uterine incision into broad ligament	3	10.34

Table-2 Indication for Peripartum Hysterectomy (N=29)

Intraoperative complications	Prevalence	Percentage
Urinary bladder injury	3	10.34
Retroperitoneal haematoma	1	3.44
Extension of tear into broad ligament	3	10.34
Coagulopathy	1	3.44
ICU admission	3	10.34
Pulmonary edema	2	6.89
Reexploratory lapratomy	2	6.89
Wound infection	3	10.34
Acute renal failure	2	3.44
DIC	2	89
Vault haematoma	1	3.44
Febrile illness	5	17.24
Anemia	25	86.2
Blood transfusion	29	100

Maternal death	3	10.34
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Table-3: Maternal Outcome (N=29)

Discussion

Despite advances in medicine and surgery, postpartum hemorrhage remains one of the leading causes of maternal morbidity and mortality. Peripartum hysterectomy is performed in the treatment of a life threatening obstetric hemorrhage that cannot be controlled by conventional methods.^{17,18,19,20,21}

The frequency of emergency peripartum hysterectomy in our study was 0.46%. It is similar to the frequency reported in other studies but it was in contrast to the high incidence found in other studies.^{22,23}

The incidence is markedly low in developed countries due to good antenatal care, improve literacy rate and good nutritional and social factors. Majority of women who underwent peripartum hysterectomy were in the age group 20-40 years and were multipara. Similar observation was found in other studies.^{24,25}

In our study, uterine rupture was the main indication followed by uterine atony and abnormally adherent placenta. The similar observation was noted in other studies.^{19,26} It was in contrast to the studies^{27,28} where morbidly adherent placenta was the main indication.

Rupture uterus in our series, indicate the wide spread negligence and ignorance prevalent in the population about pregnancy and child birth. Almost all patients were unbooked and received no antenatal care in the index pregnancy. The reason for this not only related with the limited number of maternity units but also more importantly with ignorance on the part of patients who might have not been awareness of the benefits of antenatal care.

In our series abnormal placentation contributed 17% of the hysterectomies. This was in contrast to the study conducted by Cynthia S Shelhass et al²⁹ where leading indication for peripartum hysterectomy was placenta accreta (38%) and

uterine atony (34%). Due to increased caesarean section rates now a days, rates of abdominal placentation and subsequent hysterectomy will likely continue to rise. This provides a rationale for efforts aimed at reducing the caesarean delivery rate and the encouragement of trials after caesarean delivery.³⁰ In addition to inadequate maternity care, uncontrolled or unplanned reproductive pattern giving rise to high parity has emerged clearly as a significant causative factor. Majority of the patients in our study were grand multipara.

There were three cases of urinary bladder injuries which were repaired successfully. However, no bowel or ureteric injury was reported. The maternal mortality was 6.67% in this review, through unacceptably high, was not surprising. This was very high in comparison to developed countries^{20,23}.

Peripartum hysterectomy is associated with high complication rates, mainly due to the need for massive blood transfusion, coagulopathy and injury of the urinary tract, and it is also associated with the need for reexploration because of persistent bleeding and febrile morbidity.¹⁷ All of our patients received blood transfusion.

Conclusion

The emergency peripartum hysterectomy remains a morbid procedure with high operative and postoperative complications. Morbidity associated with this procedure can be reduced if the health care team can anticipate the need for this procedure on the basis of risk factors.

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