Original Article

Peripartum Hysterectomy in a Tertiary Care hospital

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ABSTRACT:

Background and Aims: *We reviewed all peripartum hysterectomies at our institute over a 4 years period. The aim of this study was to determine the incidence, risk factors, indications and outcomes of peripartum hysterectomies.* ***Material and Methods:*** *This was a retrospective analysis of records of women who underwent emergency or elective peripartum hysterectomy in Sher-E-Bangla Medical College Hospital over a span of 4 years (Jan'2016 to Dec'2019). Association of variables was based on Chi-square test.* ***Results:*** *Sixty One (61) women underwent peripartum hysterectomy during the study period. The incidence was 2.19/1000 deliveries. In 20 (32.78%) cases, peripartum hysterectomy was planned electively while emergency hysterectomy was done in 41 (67.22%) cases. Main indications of peripartum hysterectomies were abnormal placentation (52.5%), Rapture Uterus (29.5%), atonic postpartum hemorrhage (PPH) (18%). The common maternal complications were wound infection, febrile illness and urologic injuries. There were 02 maternal deaths following emergency peripartum hysterectomy done due to placenta percreta. Thirty Two (32) hysterectomies were performed after cesarean delivery and Twenty Nine (29) hysterectomies were performed after vaginal delivery. Risk factors are Age (29.8) parity, previous history of C/S and previous history of MR/Abortion.* ***Conclusions:*** *Postpartum hemorrhage is one of the leading causes of maternal mortality and morbidity and represents the most challenging complication that an obstetrician will face. There are some risk factors for peripartum hysterectomy. The most common indication was abnormal placentation (Placenta Acrreta). The date also illustrate the incidence of emergency peripartum hysterectomy increase significantly with prior cesarean section.*

Keywords: *Peripartum hysterectomy, placenta accreta, postpartum hemorrhage.*

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INTRODUCTION:

Peripartum hysterectomy has to be performed often as the last resort in saving a woman's life. Now-a-days various drugs and surgical techniques have been developed for the management of postpartum hemorrhage. [1-3] When all the techniques become failed then peripartum hysterectomy is the main stay of treatment. Emergency peripartum hysterectomy (EPH) is an uncommon obstetric procedure,

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usually performed as a life-saving measure in cases of intractable obstetric hemorrhage. Severe postpartum hemorrhage was reported to occur in 6.7/1,000 deliveries worldwide. It is one of the leading causes of maternal mortality and morbidity and represents the most challenging complication that an obstetrician will face. The main causes of the uncontrollable hemorrhage necessitating cesarean hysterectomy have changed since the 1980s. Uterine atony and rupture have been overtaken by abnormal placentation in many studies. This is not only because of improved conservative management of uterine atony and a reduced incidence of uterine rupture due to the extensive use of the lower uterine segment incision in preference to the upper uterine segment incision for cesarean section (CS), but also because of an actual increase in the incidence of the morbidly adherent placenta. Abnormal placentation, which refers to both placenta previa and the morbidly adherent placenta, is thought to be increasing because of the rising rate of CS. Studies have consistently demonstrated that previous CS increases the risk of EPH and abnormal placentation is associated with a previous uterine scar.

The objectives of this retrospective study are to examine the incidence, risk factors, indications, outcomes and complications of cesarean hysterectomy performed in Sher-E-Bangla Medical College Hospital, a teaching hospital and referral institute in Bangladesh over a span of 04 years (Jan'2016 to Dec'2019) and to compare the results with other reports in the literature. This would help highlight the lack of availability and utilization of antenatal services, identify avoidable factors, and stress the need to organize health care services so as to improve maternal and fetal outcome.

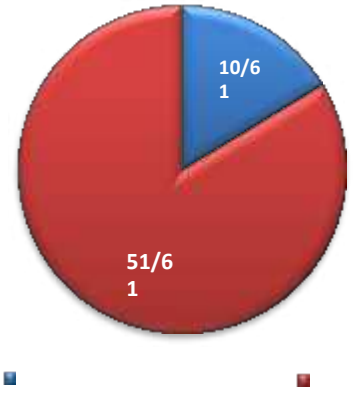
METHODS AND MATERIALS:

The present study included all women who underwent peripartum hysterectomy in the Department of Obstetrics and Gynaecology, Sher-E-Bangla Medical College Hospital, a teaching hospital and referral institute in Bangladesh over a span of 04 years (Jan'2016 to Dec'2019). Records of all women who underwent peripartum hysterectomy were collected from medical record department. Each case file was studied in detail for demographic profile, clinical characteristics, operative notes for indications, intraoperative findings, duration of surgery and blood loss and postoperative events. Ethical approval for the study was obtained from the institute ethics committee.

The data was presented as frequency or mean ± standard deviation. Data from emergency group and elective group were compared using Chi- square test.

RESULTS:

A total of 61 women underwent peripartum hysterectomy during this period. The total numbers of deliveries were 27883. Thus, the incidence of peripartum hysterectomies was 2.19/1000 deliveries. The mean age of women was 29.8 ± 4 years. Of these 61 women, 10 (16.4%) were primigravida, 12 (19.7%) were second gravida and the remaining 39 (63.9%) were multigravida. The mean gestational age was 36.7 ± 3.2 years at the time of surgery.



Primiparous Multiparous

Only 8 (13.1%) women had an unscarred uterus, 17 (27.9%) had 1 cesarean section, 35 (57.4%) had cesarean sections and 1 (1.6%) had cesarean sections. [Table:1]

Table: 1-Previous Cesarean Sections:

C / S	Frequency	Percent (%)
Unscarred	8	13.1
1	17	29.4
2	35	57.4
3	1	1.6
Total	61	100

The main indications for peripartum hysterectomy [Table:2] in this study were Abnormal Placenta 32 (52.5%), Rupture Uterus 18 (29.5%) and Atonic Uterus 11 (18%).

Table: 2-Distribution of patients by indications:

Indication	Frequency	Percent
Abnormal Placenta	32	52.5
Rupture Uterus	18	29.5
Atonic Uterus	11	18.0
Total	61	100

In 16 (40%) cases, peripartum hysterectomy was planned electively while emergency hysterectomy was done in 24 (60%) cases. All electively planned hysterectomies were diagnosed as placenta accreta either on magnetic resonance imaging or on Doppler Sonography.

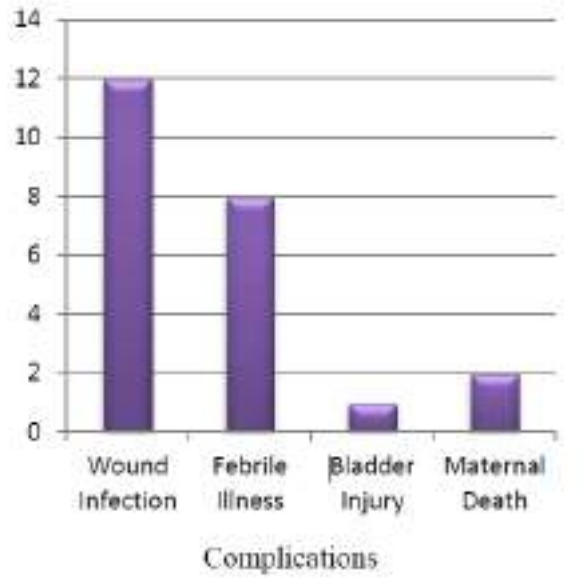
The maternal characteristics on risk factor [Table:3] analysis mean age is 29.8 ± 4 years, parity 2.5 ± 1.2 years, pregnancy week 36.7 ±3.2, previous CS 0.7 ± 0.9 and previous history of MR/AB 0.3 ± 0.6

Table: 3-Risk Factor Analysis:

Factor	Mean	SD
Age	29.8	4
Parity	2.5	1.2
Pregnancy Week	36.7	3.2
Previous CS	0.7	0.9
Previous History of discontinuation	0.3	0.6

Most common maternal complication was wound infection 12 (19.6%), febrile morbidity 8

(13.11%), Bladder injury occurred in 1 (1.6%). There were 2 (3.3%) maternal deaths, all of whom were referrals from outside.



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.

The WHO has thus emphasized on the concept of maternal near miss.[5] Any pregnant woman who undergoes peripartum hysterectomy thus could have potentially died without timely and proper management.

The incidence of peripartum hysterectomy is increasing in this era not because of improperly managed third stage of labor or obstructed labor but most likely because of increasing incidence of cesarean sections. Chances of repeat cesarean sections thus increase. This ultimately increases the incidence of placenta previa and accrete.

In our analysis, the incidence of peripartum hysterectomy is 2.19/1000 deliveries, which is much higher than reported incidence of 0.2 and in 1000 deliveries.[6,7] Over the years, the incidence of peripartum hysterectomy has drastically increased from 1.70% to 2.19% in our institute although the indications have changed. This may be explained by our institute being a referral center and women are referred either after a complication or electively for surgery after diagnosing accrete in the antenatal period.

In our study, 86.9% of women had a history of previous cesarean section, and out of these, 57.4% had ≥2 cesareans. In recent studies, the incidence of peripartum hysterectomy was higher in women who had a history of either one or two previous cesarean sections. [8,9,10,11] Placenta accreta has been the primary indication in these women and accounts for 38%–50% peripartum hysterectomy.[12,13,14,15,16].

In our study, the most common indications of peripartum hysterectomy were placenta accrete (52.5%), atonic PPH (18%), and rupture uterus (29.5%). In a similar study from our institute two decades back, the main indications were uterine rupture

(62%) followed by atony (18%) and adherent placenta (18%).[17]

In our study, there were 2 maternal deaths (3.3%). All of these women were referred from outside, and the cause of death was atonic PPH. In previous studies, also, the maternal mortality ranges from 1.2% to 19.4%.[18]

Although the incidence of atonic PPH as an indication of peripartum hysterectomy has reduced, it is still important and was the only cause of maternal deaths in our study.

In our study, 32.78% peripartum hysterectomies were electively planned and rest were done in emergency. All electively planned hysterectomies were done for placenta accrete. To prevent hemorrhage, classical cesarean was immediately followed by peripartum hysterectomy. Both groups required large number of perioperative blood transfusions. The perioperative morbidity and postoperative complications were significantly less in electively planned group.

CONCLUSION:

We conclude that the incidence of peripartum hysterectomy in our institute has increased from 1.7/1000 to 2.19/1000 deliveries. There is also a change in the indications of peripartum hysterectomy in the past two decades with placenta accrete being the commonest in our study. This is because of rising number of cesareans and early diagnosis by imaging. Patients who underwent emergency peripartum hysterectomy due to atonic PPH had a higher mortality. Elective peripartum hysterectomies with multidisciplinary approach and ICU backup for diagnosed cases of placenta accrete had better outcomes with less morbidity.

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