



OBSTETRIC HYSTERECTOMY- A CASE SERIES TO STUDY THE MATERNAL AND NEONATAL OUTCOMES AT A TERTIARY CARE CENTRE

Obstetrics & Gynaecology

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ABSTRACT

Background- To determine the fetomaternal outcomes associated with peripartum hysterectomy at a tertiary health care centre. **Material and Methods-** A retrospective observational study of fetomaternal outcomes in women undergoing obstetric hysterectomy at GMCH Nagpur over 18 months was done. **Results-** The most common age group was 26 to 30 years (50%). 37.5% booked while 62.5% were referred cases. The most common risk factor was previous caesarean section (75%). The most common indications were morbidly adherent placenta (50%), uterine atony (31.25%) and rupture uterus (18.75%). Maternal mortality rate was 18.75%. Intensive care unit admission was required in 62.5%. Favourable perinatal outcome was seen in 68.75%. **Conclusion-** Obstetric hysterectomy needs prompt decision making by the senior obstetrician to reduce the blood loss and subsequent complications. It can prove to be life-saving when interventional radiology is not immediately available.

KEYWORDS

peripartum/obstetric hysterectomy, morbidly adherent placenta, rupture uterus

INTRODUCTION

Peripartum hysterectomy refers to surgical removal of the uterus during pregnancy or postpartum. (1) It is performed for severe obstetric complications such as major obstetric haemorrhage secondary to intractable uterine atony, abnormal placentation, uterine rupture, perforation or sepsis. The procedure is usually reserved for the situations where conservative measures fail to control hemorrhage. It is associated with increased maternal mortality and morbidity.

Most of the rise in rates of obstetric hysterectomies is attributed to the rising levels of caesarean sections and its complications in subsequent deliveries. Age, parity, referral status, type of surgery and mode of delivery are the predictors of adverse clinical outcomes. (2)

A near miss event is defined as "a woman who nearly died but survived a complication that occurred during pregnancy, childbirth, or within 42 days of termination of pregnancy". (3) A woman undergoing obstetric hysterectomy due to any precipitating event falls in this category. Study of such cases helps in assessing the predisposing factors for the procedure and finds the measures that can be taken to tackle these, ultimately reducing the maternal morbidity and mortality.

MATERIALS AND METHODS

This is a retrospective observational study carried out in the Department of Obstetrics and Gynaecology, Government Medical College and Hospital, Nagpur, Maharashtra, India. During the study period of 18 months (April 2020 to September 2021), 14,181 women delivered at the institute. The subjects for the study were women undergoing peripartum hysterectomy in the institute.

Inclusion Criteria

All women who delivered in the hospital between the 18 months of study, after 24 weeks of gestation, who underwent hysterectomy for obstetric indications at the time of delivery or subsequently within the defined period of puerperium (42 days). All women who delivered outside the hospital and referred for obstetric complications meriting a hysterectomy, fulfilling all the above conditions were also included in the study.

Exclusion Criteria

Women who delivered before 24 weeks of gestation, undergoing hysterectomy for indications other than obstetric, or outside the stipulated time of 42 days post-delivery.

Sample size- 16

Sampling Method

During the study period, women undergoing obstetric hysterectomy, elective as well as emergency, were studied. Data on the indications,

risk factors and complications, mode of delivery, amount of blood loss and number of blood products transfused was retrieved. The maternal and neonatal outcome as the need for admission to intensive care unit of mother or baby, gestational age at delivery, birth weight of the baby was studied. The maternal and neonatal mortality data was also collected.

Statistical Analysis

Data was entered in Microsoft excel sheet and analysed using Epi Info (7.2.1.0).

Chi square test was applied for categorical data.

P value < 0.05 was considered significant

RESULTS

Incidence

During the study period, a total of 14181 patients delivered at our hospital. Obstetric hysterectomy was required in 16 patients with an overall incidence of 1.12 per 1000 deliveries.

Demographic Variables

Age

The mean age of patients undergoing obstetric hysterectomy was 26.75 years.

Parity

87.5% of the patients undergoing hysterectomy were multiparous. 75% were para 2 and 12.5% were para 3. Thus, multiparity is an important risk factor for obstetric hysterectomy.

Gestational Age

62.5% of the total cases were term pregnancies and 37.5% were preterm. The mean gestational age in the study was 36.4 weeks.

Booked Vs Referred Cases

Majority of the patients (62.5%) undergoing peripartum hysterectomy were unbooked (referral) cases.

Risk Factors

These risk factors can predispose to development of morbidly adherent placenta, atonic uterus causing postpartum hemorrhage or rupture uterus.

Table No. I- Pre-existing (antepartum) Factors In Women Which Can Predispose To The Indication Of Obstetric Hysterectomy

Risk factors	Number of cases	Percentage
Previous LSCS	12	75

HDP spectrum	05	31.25
Abruptio placenta	02	12.5

Mode Of Delivery Prior To Obstetric Hysterectomy

Out of the total cases, 25% delivered vaginally, 68.75% underwent lower segment caesarean section while 6.25% underwent classical caesarean section.

Indications Of The Procedure

Morbidly adherent placenta was the most common indication accounting for 8 cases (50%) followed by postpartum haemorrhage (31.25%) and rupture uterus (18.75%).

Pregnancy Outcome In The Study

Maternal morbidity and mortality

Table No. II– Maternal Morbidity And Mortality In Patients Undergoing Obstetric Hysterectomy

Maternal morbidity and mortality	Number of cases	Percentage
Hemorrhage	16	100
Blood transfusions	16	100
Shock	06	37.5
Bladder injury	01	6.25
Paralytic ileus	04	25
Wound infections	04	25
Chest infections	08	50
ICU admission	11	68.75
Death	03	18.75

The maternal mortality rate was 18.75% but morbidity was high. 68.75% cases required intensive care.

Perinatal Outcome

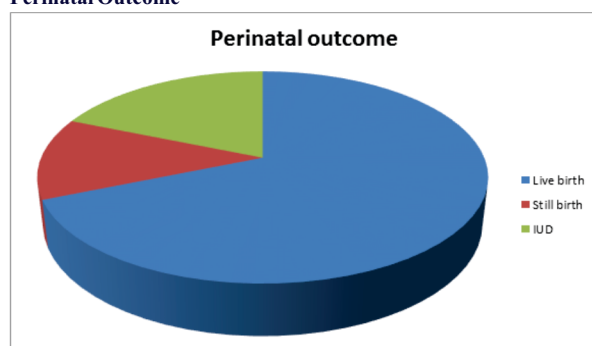


Figure No.I– Perinatal Outcome Of The Study

In our study out of 16 cases, there were 11 live births, 2 still births and 3 intrauterine deaths. 4 babies needed NICU admissions. There was 1 neonatal death out of 11 live births. (9.09%)

DISCUSSION

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 caesarean section. This has given rise to a surge in complications like abnormal placentation, uterine rupture and also the incidence of atonic postpartum haemorrhage.

Incidence

During the study period of 18 months, a total of 14181 patients delivered at our tertiary care hospital. Obstetric hysterectomy was done in 16 patients giving an overall incidence of 1.12 per 1000 deliveries. This incidence is comparable to the study conducted by Niranjana Mayadeo et al at KEM hospital in 2018 in which incidence was obtained as 1.14 per 1000 deliveries(4).

Age

The most common age group to undergo the procedure was 26 to 30 years(50%) with mean age being 26.75 years. This was slightly lower as compared to a study conducted by Niranjana Mayadeo et al at KEM hospital in which the commonest age group was 25-30 years(44%) with mean age 29.9 years.(4)

In a study by B. Chauhan in 2021 in Gujarat, 58.07% (169 out of 291) patients in the study were more than 35 years of age.(7)

Parity

87.5% of the patients undergoing hysterectomy were multiparous. 75% were para 2 and 12.5% were para 3.

In the study conducted at KEM hospital 86% were multiparous out of which 44% were para 2.(4)

Booking Status

In the present study 37.5% were booked and 62.5% were unbooked. At Safdarjung hospital, majority of patients were multiparous and unbooked.(6)

Gestational Age

62.5% of obstetric hysterectomies occurred in term pregnancies. In the study conducted at KEM hospital the mean gestational age at which women underwent obstetric hysterectomy was 34.63 weeks but the maximum percentage of obstetric hysterectomies occurred between 37-40 weeks (40%)(4).

Risk Factors

The most common risk factor was previous LSCS (75%). Manjula S. K et al in their study at Bangalore in 2019 found 61.5% cases had history of previous LSCS. 23% had abruption and 15.3% patients of hypertensive disorder compared to 12.5% and 31.5% in our study respectively.(8)

Indications Of Obstetric Hysterectomy

The most common indication was morbidly adherent placenta (50%) followed by atonic uterus (31.25%) and rupture uterus (18.75%).

64.72% women had morbidly adherent placenta, 17.64% women had placenta previa without morbid adherence. 11.76% of women had uterine atony and 5.88% had uterine rupture in a study at Faridkot in 2018.(5)

In the study by S. Kamble et al in 2021, the most common indication was postpartum haemorrhage (PPH) (41.1%) followed by uterine rupture (29.4%) and adhered placenta (23.5%).(9)

The most common indication at the Bafoussam Regional Hospital, Cameroon in the study by M. Mbakwa et al in 2021 was abnormal placentation (50%) followed by intractable postpartum haemorrhage and uterine rupture (33.33% each).(2)

Maternal Complications

In our study, 37.5% patients suffered hypovolemic shock compared to 8% cases in the study at KEM hospital.(4) In the study at KEM hospital the most frequently seen complications were urinary tract injury accounting for 10% cases(4) compared to 6.25% in our study. 15.3% cases suffered local wound infections in the study at St. John Hospital, Bangalore by Manjula S. K. et al while 25% patients in our study. Similar to our study, blood transfusion was needed in all the 50 cases in KEM hospital(100%).(4)(8)

In our study, the maternal mortality rate was 18.75% but morbidity was high. 68.75% cases required intensive care. At Safdarjung hospital mortality was 17.64% in 2016 and 18.28% in 2008.(6) At a tertiary care centre in Ahmedabad, Gujarat by Joshi et al in 2020, the maternal mortality was 16.17%.(10)

Perinatal Outcome

In our study out of 16 cases, there were 11 live births, 2 still births and 3 intrauterine deaths. 4 babies needed NICU admission (36.3%). There was 1 neonatal death out of 11 live births (9.09%). In the study at KEM 43.9% required admission in NICU. 9.76% neonatal deaths, all of whom were early neonatal deaths (within 7 days of life) The total perinatal mortality rate was 27.5%. In the study by Joshi et al in 2020, the neonatal mortality was 26.47%.(10)

CONCLUSION

The most common age group to undergo this procedure was 26 to 30 years. Out of the total cases, majority were multiparous and unbooked. The most common risk factor was history of previous uterine scar. The common indications for obstetric hysterectomy were morbidly adherent placenta, haemorrhage due to uterine atony and rupture uterus. The maternal mortality rate was 18.75% but morbidity was high with 100% requirement for blood transfusion and 68.75% cases needed intensive care.

Favourable perinatal outcome was seen in 68.75% cases. The total perinatal mortality rate was 18.75%. Thus, obstetric hysterectomy increases the risk of maternal as well as perinatal morbidity and mortality and needs prompt decision making by the senior obstetrician to reduce the subsequent complications.

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