

Clinical Study on Peripartum Hysterectomy

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Original Research Article

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Article History

Received: 23.10.2017

Accepted: 26.10.2017

Published: 30.10.2017



Abstract: Peripartum hysterectomy is a lifesaving procedure which is often performed in obstetric complications such as postpartum haemorrhage, rupture uterus etc. It is sometimes associated with both maternal and perinatal mortality. To study the incidence, various indications, risk factors, surgical complications, maternal and fetal outcome. A prospective, observational study on cases of peripartum hysterectomy was carried out over a period of 1 year from 1st July 2016 to 31st June 2017. Maternal characteristics, indications, maternal morbidity and mortality were analysed. During the study period there were total of 15259 deliveries and 40 cases underwent hysterectomy leading to an incidence of 0.26%. It was more common in multigravida (77.5%) and in the age group of 26-30 years. The majority of cases were from rural areas (87.5%) and uncooked (55%). Most common indication was rupture uterus (57.5%) and second common indication were morbidly adherent placenta (20%) and atonic PPH (20%). Incidence of maternal mortality is 7.5 % and perinatal mortality is 75%. Its prevention is the fore most goals in modern obstetrics. Availability of obstetrician, anaesthetist, neonatologist, physician, surgical services, blood transfusion facilities, dialysis facilities, good ventilator support is necessary round the clock.

Keywords: Peripartum hysterectomy obstructed labour, rupture uterus, morbidly adherent placenta

INTRODUCTION

Peripartum hysterectomy is the surgical removal of pregnant uterus at time of delivery or following delivery. It includes – both caesarean and postpartum hysterectomy [1].

Caesarean hysterectomy was 1st suggested by Cavan Elli in 1768, who experimented with hysterectomy in animal models. In 1823 James Blundell published his study of caesarean hysterectomy in the rabbit model. It was first done by Horatio Store in 1868. In 1876 Edward Porto 1st published a case report of successful caesarean hysterectomy where both mother and baby could be survived [2]. Peripartum hysterectomy is usually reserved for situation where conservative measures fail to improve the detreating condition of the mother.

MATERIAL AND METHODS

A prospective, observational study was carried out in the Department of Obstetrics and Gynaecology, Gauhati Medical College and Hospital, over a period of 1 year from 1st July 2016 to 31st June 2017. Incidence, various indications, risk factors, surgical complications,

maternal and fetal outcome were studied. The studies include cases of peripertum hysterectomy done in case of obstetric emergencies, uterine trauma, postpartum haemorrhage, rupture uterus, placenta praevia, morbidly adherent placenta etc. Cases of elective peripartum hysterectomy in case of large fibroid with pregnancy, carcinoma in situ, cervical dysplasia, septic abortion are excluded. Each case analysed in details.

RESULTS

Incidence of peripartum hysterectomy

During the study period there were total of 15259 deliveries. 40 cases underwent hysterectomy leading to an incidence of 0.26%.

Age distribution

Peripartum hysterectomy is more common in the age group of 26-30 years. 45% cases were in the age group 26-30 years, 37.5 % in the age group 21-25 years.

Parity

31 cases (77.5 %) were multigravida and 9 cases (22.5 %) were grand multipara.

ANC registration

18 cases (45%) were booked and 22 cases (55%) were unbooked.

Urban and rural distribution

The majority of cases (87.5%) were from rural areas and 12.5% were from urban area.

Indications of peripartum hysterectomy

Most common indication was rupture uterus seen in 23 cases (57.5%). Second common indication was morbidly adherent placenta in 8 cases (20%) and atonic PPH in 8 cases (20%). Broad ligament hematoma was seen in 1 case (2.5%). Cause of rupture uterus is obstructed labour (35 %), previous LSCS scar (20%) and evisceration (2.5%). 7 cases (17.5%) of placenta praevia had atonic postpartum haemorrhage and 1 case (2.5%) had atonic PPH following manual removal of placenta. Medical management with oxytocin, methergin and prostodin was done in all cases of atonic PPH. Innovative technique like uterine artery ligation was done in 4 cases (10 %), B -Lynch technique in 1 case (2.5%), and uterine artery ligation with B-Lynch suture in 2 cases (5 %).

Table-1: Indication for peripartum hysterectomy

	Number of Cases	Percentage
Atonic PPH	8	20
Rupture uterus	23	57.5
Morbidly adherent placenta	8	20
Broad ligament hematoma	1	2.5
Total	40	100

Associated factors

Associated risk factors are previous LSCS (45%), placenta praevia (32.5%), previous D & C (25%) and induction of labour (5%). Out of 18 cases of previous LSCS, 8 cases had rupture uterus, 9 cases had placenta praevia. Out of 9 cases of previous LSCS with placenta praevia, 8 cases had morbidly adherent placenta and 1 case had atonic PPH.

Type of hysterectomy

Total hysterectomy was done in majority of cases (57.5%) and subtotal hysterectomy was done in 42.5 % cases.

Type of anaesthesia

31 cases (77.5%) received general anaesthesia and 9 cases (22.5%) cases received spinal anaesthesia.

Intraoperative complication

Intraoperative complications were noted in 4 cases (10%). Bladder injury occurred in 3 cases (7.5%) and ureteral injury in 1 case (2.5%).

Postoperative complication

Fever was seen in 10 cases (25%). Others are wound dehiscence (2.5%), hypovolemic shock (12.5%), septic shock (2.5%), acute renal failure (2.5%). Laparotomy with excision of cervical stump was done in 1 case (2.5%) due to bleeding from cervical stump.

Table-2: Postoperative complications (n-17, 45%)

	Number of Cases	Percentage
Wound dehiscence	1	2.5
Postoperative fever	10	25
Hypovolemic shock	5	12.5
Septic shock	1	2.5
ARF	1	2.5
Total	18	45

MATERNAL AND FETAL OUTCOME

Blood transfusion done in all cases. Average duration of hospital stay is 10 days. 12.5% cases were admitted at ICU. Maternal mortality is 7.5%. Mortality was due to hypovolemic shock and septic shock. Total perinatal mortality is 75%. IUD was seen in 28 cases

(70%) and satisfactory results were seen in 7 cases (17.5%). 4 cases (10%) were preterm baby and 1 case (2.5%) was IUGR.

DISCUSSION

The incidence of peripartum hystrectmy in the present study is 0.26 % which is comparable to Sahu

Latika *et al.*[4] (0.2006%) , Kant Anita *et al.*[6] (0.26%) and Marwaha Parveen *et al.*[7] (0.31%).

Table-3: showing incidence of peripartum hysterectomy

Kastner <i>et al.</i> (2002)[3]	0.14%
Sahu Latika (2004)[4]	0.2006%
Kant Anita et al (2005) [6]	0.26%
Marwaha Parveen <i>et al.</i> (2008)[7]	0.31%
Singh N. <i>et al.</i> (2014)[8]	0.54%
Mukherjee S <i>et al.</i> (2016)[9]	0.39%
Present study	0.26%

In the present study peripartum hysterectomy is more common in the age group of 26-30 years , which is similar to Kant Anita *et al.*[6] (60%), Rajyashree *et al.*[10] (51.43%) and Gupta T *et al.*[11] (55.7%).

Most common indication was rupture uterus. It is seen in 23 cases (57.5%). Marwaha Parveen *et al.*[7], Sahu Latika *et al.*[4] , Singh N *et al.*[8], Mukherjee S *et al.*[9] and Srivalli Mokkaana *et al.*[12], all reported rupture uterus as the leading cause of peripartum hysterectomy. The incidence of rupture uterus in the present study is similar to Marwaha Parveen *et al.*[7] (60%), Singh N *et al.*[8] (59.04 %), Srivalli Mokkaana *et al.*[12] (55%). Rupture uterus was significantly associated with risk factors like grand multipara in 4 cases, obstructed labour in 14 cases (35%), spontaneous rupture of scared uterus in 8 cases (20%), obstetric manipulation like evisceration in 1 case (2.5%). Majority of cases of rupture uterus were unbooked, belonging to low socioeconomic group, resulting from neglected obstetric care and delayed transport. Second common indication was mobidly adherent placenta (20%) and atonic PPH (20%). In this study the incidence of morbid adherent placenta is comparable to RK Praneshwari Devi *et al.*[5] (26%), Mukherjee *et al.*[9] (30.3%) and Raghunath Bhattacharya *et al.*[13] (24.7%). The incidence of atonic PPH is comparable to RK Praneshwari Devi *et*

al.[5], Marwaha Parveen *et al.*[7] (20%), Lovina S.M. Machado *et al.*[14] (20.6%), Singh N *et al.*[8] (18.09%) and Raghunath Bhattacharjya *et al.*[13] (24.7 %). Peripartum hysterectomy was done in 1 case of broad ligament hematoma (2.5%). This finding is similar to observation by Kastner *et al.*[3] (2.1 %) and Mukherjee S *et al.*[9] (3.03%).

Intraoperative complications were noted in 4 cases (10%). Bladder injury occurred in 3 cases (7.5%) comparable to Machado *et al.*[14] (8.8 %) , Marwaha parveen *et al.*[7] (10%) M knight *et al.* [15] (7%) and Gupta T *et al.*[11] 6.7 %. Ureteral injury was seen in 1 case (2.5%) comparable to Rajyashri Sharma *et al.*[10] 1.4%. Most common postoperative complication was fever (25%) comparable to Kastner *et al.*[3] (34%), Lovina SM Machedo *et al.*[14] (26.11 %) , Singh N *et al.*[8] (28.57 %), Raghunath *et al.*[13] (35.8%), Gupta T *et al.*[11] (38%). Hypovolemic shock was seen in 5 cases (12.5 %). Wound dehiscence was seen in 1 case (2.5%). Septic shock was seen in 1 case (2.5 %) comparable to Raghunath *et al.*[13] (6.2 %). Acute renal failure was seen in 1 case (2.5 %) comparable to Raghunath *et al.*[13] (3.7 %). Incidence of maternal mortality in the present study 7.5 % which is similar to Kant Anita *et al.* [6] (9.7 %), Singh N *et al.*[8] (5.71 %), Srivalli Mokkaana *et al.*[12] (7.7 %) and Gupta T *et al.* [11] (10.1 %).

Table-4: showing incidence of maternal mortality

Sahu Latika (2004) [4]	5.55% .
Kant Anita <i>et al.</i> [6] (2005)	9.7 %
Singh N <i>et al.</i> [8](2014)	5.71 %
Srivalli Mokkaana <i>et al.</i> [12] (2016)	7.7 %
Gupta T <i>et al.</i> [11] (2017)	10.1 %
Present study	7.5%

Total perinatal mortality was seen in 30 cases (75%). Fetal outcome can be compared to Marwaha parveen *et al.*[7] (60%) and Rajyashri Sharma *et al.*[10] (62.86 %) and Singh N *et al.*[8] (85.71 %).

CONCLUSION

Its prevention is the fore most goal in modern obstetrics. Identification of high risk cases, early referral, timely performance of caesarean section, careful monitoring can reduce the near miss event. Educating the woman, her family members and the

local population is equally important to avail immediate obstetric care rather than giving unnecessary trial at home by unskilled persons. Availability of obstetrician, anaesthetist, neonatologist, physician and surgical services round the clock is required. Training of obstetrician in emergency peripartum hysterectomy is very much necessary. Special provision of blood transfusion facilities, dialysis facilities, and good ventilatory support is necessary round the clock. Availability of communication and transport facilities for these emergency patients are required.

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