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Emergency Peripartum Hysterectomy - A Study at Tertiary Care Center, Jodhpur, Western Rajasthan

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Abstract: ***Background: Post-partum hemorrhage is a significant cause of maternal mortality and morbidity. The objective of the study was to evaluate the incidence, predisposing factors & associated complications and outcome of emergency peripartum hysterectomy. Methods: It is a prospective analysis of emergency peripartum hysterectomy conducted at tertiary care center at Umaid Hospital Jodhpur, Western Rajasthan between Jan 2017 to December 2018. Results: 41 women underwent peripartum hysterectomy among 43552 deliveries, accounting to an incidence of 0. 094%. Incidence of subtotal hysterectomy after vaginal deliveries was higher as compared to cesarean deliveries. The most common indications were uterine rupture (scarred and unscarred uterus) 56.09% (23), uterine atony 41.4 (17.07%). Post- operatively 17.07% patients developed DIC (7), 17.07% patients developed febrile illness (7), 9.75% patients of ruptured uterus experienced injury to the bladder (4). Maternal mortality in this study was 12.1% (5%). Conclusions: Hysterectomy is a lifesaving procedure to control postpartum hemorrhage, but is associated with significant maternal morbidity and mortality. Uterine atony, uterine ruptures, placenta previa were identified as risk factors.. Hence only proper awareness, timely referral and correction of anemia are the key factors to be addressed in this part of the state.***

Keywords: Peripartum Hysterectomy, Postpartum hemorrhage, Obstetric Hysterectomy, Western Rajasthan, Uterine rupture

1. Introduction

Peripartum hysterectomy is defined as hysterectomy performed at the time of or within 24 hours of delivery. Emergency peripartum hysterectomy is most commonly performed to arrest or prevent hemorrhage from intractable uterine atony, abnormal placentation or trauma to genital tract.1-6

Other indications are uterine rupture, uterine extension, and post-partumuterine infection. Conservative measures to arrest bleeding are initially tried before considering EPH. The measures include uterotonic drugs, hemostatic compression sutures, stepwise uterine, ovarian artery ligation or bilateral internal iliac artery ligation.

The major complications of hysterectomy include increased blood loss, performed for hemorrhage that frequently is torrential and greater risk of urinary tract damage Uterine atony, most commonly found in prolonged, augmented and/or obstructed labor, such uteruses respond poorly to oxytocic. The majority of these cases occur at the time of caesarean section for dystocia or cephalopelvic disproportion. Uterine rupture within prior caesarean section scar, if hemorrhage cannot be controlled hysterectomy is necessary. Traumatic rupture following instrumental delivery, obstructed labor, inversion of uterus, induced labor is also possible. Secondary post-partum hemorrhage secondary to retained products and sepsis may rarely require hysterectomy.

2. Methods

This was a prospective observational study of all patients who delivered and underwent emergency peripartum hysterectomy during the period Jan 2017- December 2018 in Jodhpur, Umaid hospital, India either by vaginal delivery or caesarean sections.

Inclusion criteria

- Patients who suffered severe post-partum hemorrhage and did not respond to conservative management.
- Patients with ruptured uterus (scared and unscarred uterus) which could not be repaired.

Exclusion criteria

- Hysterectomies performed for gynecological cause were excluded from the study.
- Data observed included demographic profile – age, parity, mode of delivery, prior caesarean sections, relevant risk factors presence of placenta previa, PPH.
- Descriptive analyses were carried out to summarize relevant variables.

3. Results

Between 2017 Jan – December 2018, there were 43552 deliveries. 41 underwent emergency peripartum hysterectomy, yielding to an incidence of 0.094%. 27 patients underwent emergency peripartum hysterectomy following vaginal delivery, among whom 2 patients had instrumental delivery and 12 following caesarean section. Age distribution among the patients with underwent hysterectomy revealed that 1 patient was <20years of age 2 (4.87%), 28 (68.29%) were between the age group of 21-30 and 11 (26.8%) were of age group 31-40. Parity distribution showed that 6 were primipara (14.6%), parity of 2 were 07 (17.07%) and parity of 3 were 15 (36.5%) and beyond parity 3 were 13 (31.7%). The table below shows the age-parity distribution and mode of delivery.

Emergency Hysterectomy

Age in years		%
<20	02	4.87
21-30	28	68.29
31-40	11	26.8

Parity		
1	6	14.6
2	7	17.07
3	15	36.5
>3	13	31.7
Mode of delivery		
Vaginal	27	65.8
Cesarean	12	29.2
Instrumental	2	31.7

Out of 41 patients, 09 (21.9%) patients experienced intra-operative hypotension, 07 (17.07%) developed febrile illness, 41 (100%) required ICU care. The mean hospital stay of the patients <10days were 10 (24.3%), >10days were 26 (63.41%) patients. This table shows the associated maternal morbidity with peripartum hysterectomy. Although peripartum hysterectomy is a lifesaving procedure, it is associated with significant morbidity. Table 5 illustrates the complications patients' experienced following hysterectomy. None of the 41 patients required re-laparotomy, 07 (17.07%) patients went into DIC, 4 (9.75%) experienced bladder injury due to involvement of bladder along the rupture of uterus, repair done simultaneously during hysterectomy, 4(9.75%) were went into ARF.

5 (12.1%) patients who underwent emergency peripartum hysterectomy died during post-operative period**.** Maternal mortality was 12.1% in the study. 2 patients underwent an associated procedure for control of hemorrhage -bilateral internal iliac artery ligation.

Indications for emergency Peripartum Hysterectomy

Indications Emergency Hysterectomy %

Indications	Emergency hysterectomy	%
Atonic uterus	17	41.4%
Rupture of Scarred Uterus	08	34.7%
Rupture of unscarred uterus	15	36.58%
Primigravida	1	
Multigravida	14	
Secondary PPH	2	2.43%

Observations		%
Intraoperative hypotension	09	21.9
Febrile illness	07	17.0
ICU admission	41	100
Mean hospital stay		
<10days	10	24.3
>10days	26	63.41

Complications		*%*
DIC	7	17.0
Injury to bladder	4	9.75
ARF	4	9.75
Death	5	5.21

4. Conclusion

Rate of EPH is high in our institution with poor maternal & fetal outcomes. The incidence in this part of jodhpur was found to be significantly high due to referral cases from neighboring peripheries. Hence only proper awareness, timely referral, restricted use of prostaglandins as inducing agents in hospitals not having facilities for C-section and correction of anemia are the key factors to be addressed to this part of the state.

Improvement in female literacy levels, prevalence of contraception, increase the number of women receiving antenatal care and giving birth in hospital delivery facilities supervised by skilled care providers can contribute to reduction in maternal morbidity and mortality. Women who are at high risk for primary postpartum hemorrhage should book for antenatal care and deliver in specialized health facilities.

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