Original Article

Frequency of Factors Leading to Peripartum Hysterectomy

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Abstract

Objective: To determine the frequency of factors leading to peripartum hysterectomy.

Methodology: After getting approval from ethical committee of the institute, this present study was conducted at Obstetrics and Gynecology Department, women and children Teaching hospital Bannu. Duration of the study was one year from 2015-16. In this descriptive case series, total of 66 patients were observed. Consecutive sampling (non-probability) sampling technique was used for sample collection. All patients who had peripartum hysterectomy, any gravidity or parity, Patients who had septic induced miscarriage or perforation during evacuation and undergo hysterectomy and age group 18 to 45 years were included. While they remain admitted in the unit, these women were subjected to detailed history including booking status, obstetrical history and details of index pregnancy and the risk factors highlighted.

Results: In this study mean age was 30 years with SD ± 7.56. Forty five percent patients had injudicious use of oxytocics, (35%) patients had antepartum hemorrhage, (36%) patients had grand multiparity, (18%) patients had prolonged labour, (36%) patients had previous C/S, (36%) patients had postpartum hemorrhage, (23%) patients had obstructed labour.

Conclusion: Our study concludes that the most common factors leading to peripartum hysterectomy were injudicious use of oxytocics 45%, antepartum hemorrhage 35%, grand multiparity 36%, prolonged labour 18%, previous C/S 36%, postpartum hemorrhage 36%, obstructed labour 23%.

Keywords: Risk factors, peripartum hysterectomy, Gravidity & Parity.

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Introduction

Emergency peripartum hysterectomy is the removal of uterus and is a life-saving procedure performed at the time of caesarian section, following caesarian section, immediately after vaginal delivery or in the period of puerperium in cases of intractable hemorrhage not responding to other measures.[1-5] In the past the most common indication was rupture uterus but due to increase in the number of caesarian section, the abnormal placental adherents is emerging as the leading indication of peripartum hysterectomy.[3-7] Peripartum hysterectomy is associated with substantial morbidity and mortality worldwide[8,9] and the outcome greatly depends upon timely decision, surgical skills and speedy intervention.[10] The incidence of peripartum hysterectomy varies in different countries[11] and range from 0.13 in Taiwan and 0.24 in Denmark to 0.82 in the USA and 5.38 in Turkey expressed per thousand deliveries[12].In a study conducted at Ayub Teaching Hospital Abbottabad, the incidence of

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emergency peripartum hysterectomy was 10.52/1000 deliveries.[6] The high incidence of emergency peripartum hysterectomy in the developing world may be due to the lack of availability of modern conservative procedures involving interventional radiology and inadequate blood and blood products transfusion facilities which limits the time available to see the effectiveness of other conservative procedures.[8] In order to provide us fresh local data and to determine the magnitude of the risk factors and to organize health care services so as to improve the maternal and fetal outcome, the current study was designed to determine the frequency of factors of emergency peripartum hysterectomy.

Methodology

After getting approval from an ethical committee of the institute, this study was conducted at Obstetrics and Gynecology Department, women and children Teaching Hospital Bannu. Duration of the study was one year from 2015-16. The study design was Descriptive case series.

Sample size: the Sample size was 66. The sample size was calculated using the WHO software for sample size determination in health studies making use of the formula: estimating a proportion with specific absolute precision with the following assumptions: confidence level=95%, the Anticipated proportion of the risk of PPH=29.30% 5 Absolute precision=11%.

Sampling Technique: Consecutive sampling (non-probability) sampling technique was used for sample collection.

Inclusion & exclusion criteria: All patients who had a peripartum hysterectomy, any gravidity or parity, Patients who had a septic induced miscarriage or perforation during evacuation and undergo hysterectomy and age group 18 to 45 years were included. While patients admitted in unit after having a peripartum hysterectomy performed outside the place of study were excluded.

The purpose and benefits of the study was explained to all patients and a written informed consent was obtained. These women after undergoing hysterectomy was remain admitted in unit and managed as per protocols of the unit. While they remain admitted in the unit, these women were subjected to detailed history including booking status, obstetrical history and details of index pregnancy and the risk factors highlighted. All the information was recorded on a pre-designed pro forma by the trainee.

Statistical analysis: Data was analyzed using SPSS. Categorical variables like different risk factors were described as frequencies and percentages. Quantitative variables like age, gravidity and parity was described as mean ± standard deviation. Data was presented in tables and diagrams. Data was stratified by age, and parity with respect to outcome variables. To know significant differences by different age, and parity groups with respect to outcome variables, chi- square test was used at 5% significance level.

Results

In this study mean age was 30 years with SD ±7.56. Fifty five percent patients were multi gravida while 45% patients were grand multi gravida. Status of parity among 66 patients was analyzed as 42(64%) patients were multi para while 24(36%) patients were grand multi para. (Table no I).

Table No I: Gravidity & Parity (n=66)

Gravidity	Frequency	%	Parity	Frequency	%
Multi gravida	36	55%	Multi para	42	64%
Grand multi gravida	30	45%	Grand multi para	24	36%
Total	**66**	**100%**	**Total**	**66**	**100%**

Forty five percent patients had injudicious use of oxytocics, 23(35%) patients had antepartum hemorrhage, 24(36%) patients had grand multiparity, 12(18%) patients had prolonged labour, 24(36%) patients had previous C/S, 24(36%) patients had postpartum hemorrhage, 15(23%) patients had obstructed labour. (Table II). Stratification of risk factors with age and parity is given in tables III & IV.

Table No II: frequency of risk factors (n=66)

Risk factors	frequency	percentage
Injudicious use of oxytocics	30	45%
Antepartum hemorrhage	23	35%
Grand multiparity	24	36%
Prolonged labour	12	18%
Previous c section	24	36%
Postpartum hemorrhage	24	36%
Obstructed labour	15	23%

Table III. Stratification of Frequency of Risk Factors W.R.T Age Distribution (n=66)

Risk factors		18-30 years	31-45 years	Total	P value
Injudicious use of oxytocics	**Yes**	18	12	30	0.8909
	No	21	15	36	
Total		**39**	**27**	**66**	
Antepartum hemorrhage	**Yes**	14	9	23	0.8298
	No	25	18	43	
Total		**39**	**27**	**66**	
Grand multiparity	**Yes**	14	10	24	0.9246
	No	25	17	42	
Total		**39**	**27**	**66**	
Prolonged labour	**Yes**	7	5	12	0.9529
	No	32	22	54	
Total		**39**	**27**	**66**	
Previous c section	**Yes**	14	10	24	0.9246
	No	25	17	42	
Total		**39**	**27**	**66**	
Postpartum hemorrhage	**Yes**	14	10	24	0.9246
	No	25	17	42	
Total		**39**	**27**	**66**	
Obstructed labour	**Yes**	9	6	15	0.9351
	No	30	21	51	
Total		**39**	**27**	**66**	

Table IV: Stratification of frequency of risk factors w.r.t parity distribution (n=66)

Risk factors		Multi para	Grand multi para	Total	P value
Injudicious use of oxytocics	**Yes**	19	11	30	0.9627
	No	23	13	36	
Total		**42**	**24**	**66**	
Antepartum hemorrhage	**Yes**	15	8	23	0.8452
	No	27	16	43	
Total		**42**	**24**	**66**	
Grand multiparity	**Yes**	15	9	24	0.8847
	No	27	15	42	
Total		**42**	**24**	**66**	
Prolonged labour	**Yes**	8	4	12	0.8094
	No	34	20	54	
Total		**42**	**24**	**66**	
Previous c section	**Yes**	15	9	24	0.8847
	No	27	15	42	
Total		**42**	**24**	**66**	
Postpartum hemorrhage	**Yes**	15	9	24	0.8847
	No	27	15	42	
Total		**42**	**24**	**66**	
Obstructed labour	**Yes**	10	5	15	0.8497
	No	32	18	51	
Total		**42**	**24**	**66**	

Discussion

Different level of obstetric health care and patient load may be the cause of the difference in the incidence of EPH. Another cause of rise in the frequency of EPH may be the increased number of un-booked status of antenatal patients and increase the number of referred cases with serious health conditions.[11]

Our study shows that among 66 patients mean age was 30 years with SD ± 7.56. Forty-five percent patients had Injudicious use of oxytocics, (35%) patients had antepartum hemorrhage, (36%) patients had grand multiparity, (18%) patients had prolonged labour, (36%) patients had previous C/S, (36%) patients had postpartum hemorrhage, (23%) patients had obstructed labour.

In another study conducted at Liaquat University of Medical and Health Sciences Hospital, Hyderabad, Pakistan the factors predisposing to emergency peripartum hysterectomy were injudicious use of oxytocics (58.5%), Antepartum hemorrhage (34.1%), grand multiparity (39%), prolonged labor (39%), previous caesarian section (29.3%), Post-partum hemorrhage (29.3%), obstructed labor (31%).[5]

Bashir A and Zelop had reported that the most of the patients in whose caesarean hysterectomy was performed were of age 26–40 years and were Multipara.[12,13] Omore over Bashir A had also reported that the other risk factors for emergency peripartum Hysterectomy were previous caesarean birth, current caesarean delivery, abnormal placental implantation and invasion.[13]

Selo-Ojeme had reported that the uterine rupture 33.3% was the the most frequent cause of EPH, followed by uterine atony of 28%, morbid adherence of placenta 23% and uncontrollable bleeding from placental bed 14%.[14] while morbidly adherent placenta and uterine atony were the most frequent reasons reported from developing countries like Pakistan.[9] The indications of EPH change over a time and from region to region. Our study show that the injudicious use of oxytocin and trial of labour with previous scar by untrained birth attendants was the most common cause of EPH. This fact indicates the problems like illiteracy, poverty, lack of antenatal care and poor access to maternal health care services in our setup.[14,15]

The incidence of EPH due to uterine atony has declined from 42 to 29.2%, while incidence due to abnormal placentation has increased from 25.6 to 41.7%, this may be due to increase rate of placental insertion and invasion anomalies which can be associated with increased number of caesarean deliveries and better treatment of uterine atony with PG preparations during the last two decades.[16]

Baskett JF in a study reported that the incidence of Morbid Adherent Placenta (MAP) has increased from 0.5 to 3.9%[3], for which placenta previa and previous caesarean births are main risk factors. The EPH has been recommended for life-saving procedure for MAP.[17]

The maternal mortality in our study was 8(12%) which is almost similar to the reported studies 70 but very high in comparison to developed countries. Delay in arrival to the hospital, un-booked status, and delay in making the decision for EPH may lead to high mortality as hysterectomy is the last resort when all other conservative measures fail to stop the bleeding.

EPH is associated with many complications like extensive PPH, need for extensive transfusions, urinary tract injuries and DIC as reported in other similar studies and. [16 17]

Conclusion

Our study concludes that the most common factors leading to peripartum hysterectomy were the injudicious use of oxytocics, antepartum hemorrhage, grand multiparity, prolonged labour, previous C/S, postpartum hemorrhage, obstructed labor.

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Corrigendum

The designation of the second author (**Alia Butt**) of the article titled 'Role of Chewing Gum as A Predictor to Return of Bowel Activity After Caesarean Section' which was published in Vol 7(3) July-Sept 2017:119-123 was the typo error.

The correct designation of the second author of this published article should be read as **Medical officer** instead of Assistant Professor

The typo error has been corrected in the online version of published manuscript.