International Journal of Medical Research Professionals
P-ISSN: 2454-6356; E-ISSN: 2454-6364
DOI: 10.21276/ijmrp

Original Research Article.

Analysis of Prevalence of Peripartum Hysterectomy: An Institutional Based Study

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ABSTRACT

Background: Postpartum hemorrhage (PPH) is a life-threatening condition. Various drugs and surgical techniques have been developed over time, especially to preserve the uterus. Hence; the present study was conducted for assessing the prevalence of peripartum hysterectomy in a tertiary care hospital.

Materials & Methods: A total of 400 subjects were screened for the present study. Complete demographic details of all the subjects were obtained. Complete list of all the gynecological and obstetrics procedures to be taken up among these 400 subjects was also made. A Questionnaire was made and detailed clinical and medical history of all the subjects was utilized. Prevalence and risk factor assessment of peripartum hysterectomy was done separately. All the results were recorded in Microsoft excel sheet and was subjected to statistical analysis using SPSS software. Univariate analysis was done for evaluation of level of significance.

Results: A total of 400 subjects were analyzed. Peripartum hysterectomy was done in 47.5 percent of the subjects. Increasing age, emergency admission and hospital stay of more than 4 days were found to be significant risk factors for peripartum hysterectomy.

Conclusion: Peripartum hysterectomy is a major surgical procedure. An early decision should save blood and prevent complications.

Key words: Peripartum, Hysterectomy.

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Article History:

Received: 09-03-2020, **Revised:** 05-04-2020, **Accepted:** 11-05-2020

Access this article online	
Website: www.ijmrp.com	Quick Response code
DOI: 10.21276/ijmrp.2020.6.3.050	

INTRODUCTION

Postpartum hemorrhage (PPH) is a life-threatening condition. Various drugs and surgical techniques have been developed over time, especially to preserve the uterus. However, in some circumstances, an emergency peripartum hysterectomy has to be performed often as the last resort in saving a woman's life. It is thus an unequivocal marker of severe maternal morbidity and mortality.[1-3] Emergency peripartum hysterectomy (EPH) is a major surgical venture invariably performed in the setting of life-threatening hemorrhage during or immediately after abdominal and vaginal deliveries. Despite advances in medical and surgical fields, post-partum hemorrhage continues to be the leading cause of maternal morbidity and mortality.[4, 5]

Worldwide, the rate of peripartum hysterectomy varies widely. In high income countries less than one in 1000 deliveries is complicated by peripartum hysterectomy The rate of emergency peripartum hysterectomy has been increasing over time. In USA, it increased by 12% between 1998 and 2003 and by 15% between 1995 and 2007. The risk factors for peripartum hysterectomy are advanced maternal age, abnormal placentation, higher parity, and caesarean delivery in previous or current pregnancy.[8-10] Hence; the present study was conducted for assessing the prevalence of peripartum hysterectomy in a tertiary care hospital.

MATERIALS & METHODS

The present study was conducted in Department of Obstetrics and Gynaecology, Maharajah's Institute of Medical Sciences, Vizianagaram, Andhra Pradesh (India) for assessing the prevalence of peripartum hysterectomy. A total of 400 subjects were screened for the present study. Complete demographic details of all the subjects were obtained. Complete list of all the gynecological and obstetrics procedures to be taken up among these 400 subjects was also made. A Questionnaire was made and detailed clinical and medical history of all the subjects was utilized. Prevalence and risk factor assessment of peripartum hysterectomy was done separately. All the results were recorded in Microsoft excel sheet and was subjected to statistical analysis using SPSS software. Univariate analysis was done for evaluation of level of significance.

Table 1: Prevalence of peripartum hysterectomy

Peripartum hysterectomy	Number	Percentage
Done	190	47.5
Not done	210	52.5
Total	400	100

Table 2: Risk factors of peripartum hysterectomy

Risk factors	Odds ratio	p-value
Increasing age	1.225	0.001 (Significant)
Urban residence	0.277	0.398
Emergency admission	-1.398	0.001 (Significant)
Hospital stay of more than 4 days	-0.936	0.000 (Significant)

RESULTS

A total of 400 subjects were analyzed. peripartum hysterectomy was done in 47.5 percent of the subjects. Increasing age, emergency admission and hospital stay of more than 4 days were found to be significant risk factors for peripartum hysterectomy.

DISCUSSION

The removal of the uterine corpus (alone or with the cervix) at the time of a cesarean section, or shortly after a vaginal delivery, is one of the riskiest and more dramatic operations in modern obstetrics. It is so, due in large part to the circumstances requiring it, as well as to the extraordinary anatomic changes of the organs and vessels involved, compared to standard gynecologic procedures. At the present time the necessity to remove the uterus is generally due to an emergency arising during a cesarean section, or immediately following a vaginal delivery. As such, it is unplanned and needs to be carried out with expediency of decision as well as of execution. In addition, the patient is generally in less than ideal condition due, most of the times, to acute blood loss or severe infection.[11- 13] Hence; the present study was conducted for assessing the prevalence of peripartum hysterectomy in a tertiary care hospital.

A total of 400 subjects were analyzed. peripartum hysterectomy was done in 47.5 percent of the subjects. Increasing age, emergency admission and hospital stay of more than 4 days were found to be significant risk factors for peripartum hysterectomy. Castaneda S et al reviewed the cases receiving peripartum hysterectomies treated in this hospital. In 58% of 217 cases the operation was planned, and total hysterectomy was done in 94%. Indications changed through the years, from predominantly elective to almost exclusively emergencies. These were mostly bleeding complications, in particular placenta previa and/or accreta. The presence of a uterine scar or submucous fibroid was associated with 79% (26/33) of accretas, and 51% (19/37) of previas. Among the 126 planned, 57% did not receive a transfusion and 84% of 91 emergencies did have one. The average amount of blood received by the latter was 3009 ml compared to 1262 ml for the former ($p < 0.0001$). There was a direct relationship between amount of blood loss and volume transfused. There were 26% intraoperatory bleeding complications and 5% urinary tract injuries. Postoperatory morbidity such as bleeding, infections, wound dehiscence, and others was observed in 17% of planned, and 23% of emergencies. Twelve patients needed another operation to treat some of these complications. There were no deaths recorded.[11]

Huque S et al used data from the World Maternal Antifibrinolytic (WOMAN) trial carried out in 193 hospitals in 21 countries. Peripartum hysterectomy was defined as hysterectomy within 6 weeks of delivery as a complication of postpartum haemorrhage. Univariable and multivariable random effects logistic regression models were used to analyse risk factors. A hierarchical conceptual framework guided our multivariable analysis. Five percent of women had a hysterectomy (1020/20,017). Haemorrhage from placenta praevia/accreta carried a higher risk of hysterectomy (17%) than surgical trauma/tears (5%) and uterine atony (3%). The adjusted odds ratio (AOR) for hysterectomy in women with placenta praevia/accreta was 3.2 (95% CI: 2.7–3.8), compared to uterine atony. The risk of hysterectomy increased with maternal age. Caesarean section was associated with fourfold higher odds of hysterectomy than vaginal delivery (AOR 4.3, 95% CI: 3.6–5.0). Mothers in Asia had a higher hysterectomy incidence (7%) than mothers in Africa (5%) (AOR: 1.2, 95% CI: 0.9–1.7).[10] Campbell SM et al evaluated the risk factors of peripartum hysterectomy. In 1999-2013 there were 298 PH cases, a rate of 0.32/1000 deliveries. During the period 2005-2013, the PH rate was 50 times higher in deliveries involving PPH, 100 times higher with placenta praevia and 1000 times higher with MAP. During the clinical audit (2011-2013) there were 65 PH cases, a rate of 0.33/1000 deliveries, increasing with advancing age and parity. The reporting of abnormal placentation, primarily the co-occurrence of placenta praevia and MAP, was linked with previous CS. Fifty-six of the 65 cases suffered MOH, most commonly associated with placenta praevia, MAP and uterine atony.[14] Machado LS et al evaluated the incidence of peripartum hysterectomy. A Medline search was conducted to review the recent relevant articles in English literature on emergency peripartum hysterectomy. The incidence, indications, risk factors and outcome of emergency peripartum hysterectomy were reviewed. The incidence of emergency peripartum hysterectomy ranged from 0.24 to 8.7 per 1000 deliveries. Emergency peripartum hysterectomy was found to be more common following cesarean section than vaginal deliveries. The predominant indication for emergency peripartum hysterectomy was abnormal placentation (placenta previa/accreta) which was noted in 45 to 73.3%, uterine atony in 20.6 to 43% and uterine rupture in 11.4 to 45.5 %. The risk factors included previous cesarean section, scarred uterus, multiparity, older age group. The maternal morbidity ranged from 26.5 to 31.5% and the mortality from 0 to 12.5% with a mean of 4.8%. The decision of performing total or subtotal hysterectomy was influenced by the

patient's condition. Emergency peripartum hysterectomy is a most demanding obstetric surgery performed in very trying circumstances of life-threatening hemorrhage.[15]

CONCLUSION

Peripartum hysterectomy is a major surgical procedure. An early decision should save blood and prevent complications.

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Source of Support: Nil.

Conflict of Interest: None Declared.

Cite this article as: B. Ganesh Babu, Seema P Dande. Analysis of Prevalence of Peripartum Hysterectomy: An Institutional Based Study. Int J Med Res Prof. 2020 May; 6(3): 223-25.
DOI:10.21276/ijmrp.2020.6.3.050