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

IJMRP

Original Research Article.

Incidence of Emergency Peripartum Hysterectomy: An Institutional Based Study

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ABSTRACT

Background: To study incidence of emergency peripartum hysterectomy.

Materials & Methods: A total of 200 deliveries were performed. The mean maternal age was 30.56 years. The detailed history includes previous obstetric history, details of the index pregnancy and indications for emergency peripartum hysterectomy. The data was collected, and results were analysed using SPSS software.

Results: The most common indication of emergency peripartum hysterectomy was placenta accreta/increta 4 (40 %) followed by atonic uterus while the least common was placenta previa without accreta (10 %).

Conclusion: Abnormal placentation was the main indication for peripartum hysterectomy.

Keywords: Peripartum Hysterectomy, Uterine Atony, Placenta.

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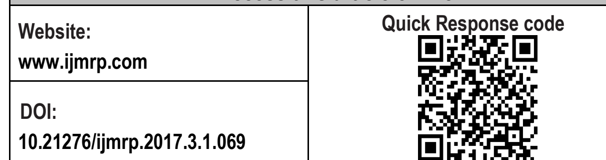
Article History:

Received: 04-01-2017, **Revised:** 17-01-2017, **Accepted:** 28-01-2017

Access this article online	
Website: www.ijmrp.com	Quick Response code
DOI: 10.21276/ijmrp.2017.3.1.069	



INTRODUCTION

Peripartum hysterectomy is a procedure performed at the time of delivery or in the immediate postpartum period (within 24 h). It is one of the most severe complications in obstetrics and it is related to significant maternal mortality and morbidity. This procedure is typically reserved for situations in which severe obstetric hemorrhage fails to respond to conservative treatment. Peripartum hysterectomy is associated with severe blood loss with risk of transfusion, intraoperative complications, and significant postoperative morbidity. Emergency peripartum hysterectomy is mostly performed as life-saving procedure in case of intractable obstetric haemorrhage.[1]

Hysterectomy following cesarean section (CS) was first described by Porro, and was used to prevent maternal mortality due to post-partum hemorrhage.[2] The reported incidence of EPH varies from 0.24 to 8.9 per 1000 deliveries, ranging from 0.33(Netherland), 0.2 (Norway), 0.3 (Ireland), 0.5 (Israel), 0.63 (Saudi Arabia) and 1.2 to 2.7 per 1000 deliveries in USA.[3-6]

A difference in the incidence of EPH is noted following vaginal delivery and cesarean section.[7] While the incidence of EPH after vaginal delivery varies from 0.1 to 0.3/1000 deliveries and is rather constant between European and US studies, the incidence of EPH following CS varies widely between 0.17 and 8.7/1000 deliveries.[7] This is attributed to the proportion of women with previous CS with the concomitant risk of placenta previa and accreta.[3,7-9]

In developed countries, maternal deaths occur extremely rarely. Severe near-miss complications (women who experience severe complications of pregnancy or delivery, and who nearly died but survived) may, therefore, serve as a surrogate marker for the quality of care. The World Health Organization (WHO) collected data in 29 countries on maternal deaths and near-miss cases[10], finding that pre-eclampsia/eclampsia and PPH represented the two most frequent maternal complications. A deeper understanding of these complications may improve obstetric care. In addition, these severe near-miss cases often go underreported in national health registers.[11,12] Thus, a better understanding of these conditions may also improve patient safety. Hence, this study was conducted to study incidence of emergency peripartum hysterectomy.

MATERIALS & METHODS

A total of 200 deliveries were performed in Department of Obstetrics and Gynaecology, Fathima Institute of Medical Sciences, Kadapa, Andhra Pradesh, India. The mean maternal age was 30.56 years. The detailed history including previous obstetric history, details of the index pregnancy and indications for emergency peripartum hysterectomy. 10 hysterectomies were performed, and records were available for analysis. The data was collected, and results were analysed using SPSS software.

Table 1: Incidence of emergency peripartum hysterectomy

Total deliveries	Vaginal deliveries	Caesarean deliveries (%)	Emergency peripartum hysterectomy	Incidence
200	120	70 (35%)	10	5

Table 2: Indications of emergency peripartum hysterectomy

Indications	Frequency	Percentage
Atonic uterus	3	30
Placenta accrete/ increta	4	40
Ruptured uterus	2	20
Placenta previa without accrete	1	10

RESULTS

A total of 200 deliveries were performed. 10 deliveries were followed by emergency peripartum hysterectomy. The mean maternal age was 30.56 year. Cases of emergency peripartum hysterectomy due to either uterine rupture or placenta previa with or without accrete were exclusively multipara. The most common indication of emergency peripartum hysterectomy was placenta accreta/increta 4 (40 %) followed by atonic uterus while the least common was placenta previa without accreta (10 %).

DISCUSSION

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.[9,13,14] Despite advances in medical and surgical fields, post-partum hemorrhage continues to be the leading cause of maternal morbidity and mortality. Hence, this study was conducted to study incidence of emergency peripartum hysterectomy.

In the present study, a total of 200 deliveries were performed. 10 deliveries were followed by emergency peripartum hysterectomy. The mean maternal age was 30.56 year. Cases of emergency peripartum hysterectomy due to either uterine rupture or placenta previa with or without accrete were exclusively multipara [$p < 0.001$]. A study by Allam IS et al, estimated the incidence of emergency peripartum hysterectomy over 6 years in Ain-shams University Maternity Hospital. The overall rate of emergency peripartum hysterectomy was 149 of 66,306 or 2.24 per 1,000 deliveries. The primary indications for hysterectomies were placenta accreta/increta 59 (39.6 %), uterine atony 37 (24.8 %), uterine rupture 35 (23.5 %) and placenta previa without accreta 18 (12.1 %). After hysterectomy, 115 (77 %) women were admitted to the intensive care unit. Women were discharged home after a mean 11.2-day length of stay. Using multifactorial logistic regression analysis, we found that woman's age, atonic uterus, placenta accreta/increta, previous cesarian section and ruptured uterus were independent predictors for peripartum hysterectomy. Abnormal placentation was the main indication for peripartum hysterectomy. The risk factors for peripartum hysterectomy were morbid adherence of placentae in scared uteri, uterine atony and uterine rupture. The most important step in prevention of major postpartum hemorrhage is recognizing and assessing women's risk. The risk of peripartum hysterectomy seems to be significantly decreased by limiting the number of cesarean section deliveries, thus reducing the occurrence of abnormal placentation in the form of placenta accreta, increta or percreta.[15]

In the present study, the most common indication of emergency peripartum hysterectomy was placenta accreta/increta 4 (40 %) followed by atonic uterus while the least common was placenta previa without accreta (10 %). Another study by Zelop CM et al, by means of hospital-based data over 9 years sought to evaluate the clinical indications and incidence of emergency peripartum hysterectomy by demographic characteristics and reproductive history. There were 117 cases of peripartum gravid hysterectomy identified during this period, for an overall annual incidence of 1.55 per 1000 deliveries. The rate increased with increasing parity and was significantly influenced by placenta previa and a history of cesarean section. The incidence by parity increased from one in 143 deliveries in nulliparous women with placenta previa to one in four deliveries in multiparous women with four or more deliveries with placenta previa. Likewise, the incidence increased from one in 143 deliveries in women with one prior live birth and a prior cesarean section to one in 14 deliveries in multiparous women with four or more deliveries with a history of a prior cesarean section. Both these trends were highly significant ($p < 0.001$). Abnormal adherent placentation was the most common cause preceding gravid hysterectomy (64%, $p < 0.001$), with uterine atony accounting for 21%. Although no maternal deaths occurred, maternal morbidity remained high, including postoperative infection in 58 (50%), intraoperative urologic injury in 10 patients (9%), and need for transfusion in 102 patients (87%).[16] Another study by Machado LS et al, depicted peripartum hysterectomy is a major operation and is invariably performed in the presence of life-threatening hemorrhage during or immediately after abdominal or vaginal deliveries. 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. The indication for emergency peripartum hysterectomy in recent years has changed from traditional uterine atony to abnormal placentation. Antenatal anticipation of the risk factors, involvement of an experienced obstetrician at an early stage of management and a prompt hysterectomy after adequate resuscitation would go a long way in reducing morbidity and mortality.[17]

CONCLUSION

Abnormal placentation was the main indication for peripartum hysterectomy.

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Source of Support: Nil.

Conflict of Interest: None Declared.

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Cite this article as: Shobha, B. Ganesh Babu. Incidence of Emergency Peripartum Hysterectomy: An Institutional Based Study. Int J Med Res Prof. 2017; 3(1):327-29.

DOI: 10.21276/ijmrp.2017.3.1.069