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EMERGENCY PERIPARTUM HYSTERECTOMY IN A TERTIARY CARE HOSPITAL

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ABSTRACT

Objectives: To find out the frequency, indications, preoperative morbidity and mortality of Emergency Peripartum Hysterectomy (EPH).

Material and Methods: This retrospective descriptive study was conducted in the Obstetric and Gynecology Unit of Hayatabad Medical Complex, Peshawar from January 2007 to December 2009. All EPH done during the study period were included. Data regarding maternal age, parity, booking status, referral history, clinical feature, mode of delivery, indications and perioperative morbidity and mortality were recorded and analyzed.

Results: Total number of deliveries during the study period were 16245 and total number of patients with EPH were fifty one giving rise to a frequency of 0.31% (3.1/1000). Mean age and parity was 35 years and 7 respectively. Majority (94.21%) of patients were admitted through emergency. They were referred from periphery hospital in serious condition. The main indication was ruptured uterus (30, 58.8%) followed by uterine atony (12, 23.5%) Subtotal Hysterectomy done in all cases. All patients required blood transfusion, 36 (70.5%) patients received in shock, 21 (41.1%) required ICU admission, 18 (35.2%) developed DIC. Renal failure occurred in 6 cases, febrile illness in 36 (70.5%) and wound infection was in 21cases (41.1%). Maternal mortality occurred in 9 cases (17.6%). These were due to severe hemorrhage leading to irreversible shock, renal failure and coagulopathy.

Conclusion: Frequency of EPH was high in this study. Advanced age, high parity and lack of antenatal care were seen as high risk factor. Ruptured uterus due to ingudicious use of oxytocin by unskilled birth attendant remain the main reason for EPH. It is associated with high maternal morbidity and mortality.

Key Words: Emergency, obstetric, Haemorrhage, Emergency Peripartum hysterectomy, Ruptured uterus.

INTRODUCTION

Obstetrical haemorrhage is one of the leading cause of maternal death globally. Annually an estimated 150000 maternal deaths occur worldwide from obstetric haemorrhage[1]. Emergency Peripartum Hysterectomy is one of the life saving procedures performed after vaginal or caesarean birth in cases of obstetrical hemorrhage due to uterine atony, uterine rupture and placental disorder when conservative measures fail to control the hemorrhage[2].

The procedure has been in use for more than 100 years. Edward poro (1876) published the first case report of the procedure[3]. In modern obstetrics, the overall incidence of EPH is 0.5 to 1% of the deliveries[4]. But there is considerable difference in its incidences and indications is different parts of the world which may be a reflection of the rate of caesarean section (C-section), 3rd stage abnormalities and quality of antenatal and intra partum care in various countries[5].

In developing countries including Pakistan rupture uterus has been reported to be the most common indication form EPH[2,3,4] where as in developed countries abnormal placentation is a common indication[6,7,8]. The operation is considered one of the major complication in modern obstetrics and carries a high maternal mortality and morbidity risk[9]. The objective of this study was to determine the frequency, risk factors, indications and associated maternal morbidity and mortality of EPH in a tertiary care teaching hospital of Peshawar.

MATERIAL AND METHODS

This retrospective descriptive study was conducted in the Obstetric and Gynecology Unit Hayatabad Medical Complex, Peshawar from January 2007 to December 2009. All those patients who under went emergency peripartum hysterectomy were included in the study. EPH was defined as hysterectomy performed at the time of delivery or caesarean or in the immediate postpartum period (within 24 hours of delivery). Hysterectomies done for

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early pregnancy complications like perforated uterus due to induced abortion were excluded. The medical records of all these patients were scrutinized and information obtained from yearly maintain registers. Data regarding maternal age, parity, booking status, referral history presenting clinical features, mode of delivery, associated morbidity and maternal mortality, examination finding, presence of shock and laboratory investigation for anaemia, coagulopathy, renal failure and transfusions were recorded. All the collected data was entered and analyzed using SPSS version 10 to calculate the frequency and percentages.

RESULTS

A total of fifty one EPH were done during the study period. Total deliveries during the same period were 16245 giving rise to a frequency of 0.31% (3.1/1000). Age of the patients ranges from 26-45 years with a mean age 35.4 years. Majority of the patient 33 (64.6%) were in the age group 31-40 years. All the patient were either multipara (7.41%) or grand multitpara (10, 58.8%) with mean parity was 7.4. The maximum parity recorded was P12, only three case was booked while 48 (94.2%) were admitted in emergency (Table 1).

Table 2 shows the mode of delivery in these patients. Normal vaginal delivery occurred in 15 patients (29.4%) followed by ruptured uterus in 9 cases and uterine atony in 6 cases.

Three patients delivered as instrumental vaginal delivery followed by ruptured uterus. C. section done in 12 cases (23.5%) followed by hysterectomy for placenta previa with increta in three cases, placental abruption in 6 and uterine atony in three cases. The most common indication for EPH was rupture uterus

Table 1: Age, Parity and Antenatal Booking Status

Age(years)	Number: 51	Percentages
26 to 30	09	17.6%
31 to 35	21	41.1%
36 to 40	12	23.5%
41 to 45	09	17.6%
Mean Age	35.4 years	
Parity		
P1	0	
P2+P5	21	
P6+above Mean Parity	30 7.4	58.8%
Booking Status		
Un Booked	48	94.4%
Booked	3	5.8%

Table 2: Mode of Delivery and Indications for EPH (Number: 51)

Mode of Delivery	Number: 51	Percentage
Normal Vaginal Delivery	15	29.4%
Instrumental Vaginal Delivery	3	5.8%
Caesarean Section	12	23.4%
Laprotomy for ruptured Uterus	21	58.8%
Indication for EPH		
Ruptured Uterus	30	58.8%
Uterine Atony	12	23.5%
Placental Abruption	06	11.7%
Placenta Praevia with Increta	03	5.8%

Table 3: Preoperative morbidity and mortality (Number 51)

Morbidity	Number	Percentage
Anemia	51	100%
Febrile illness	36	70.5%
Shock	36	70.5%
ICU admission	21	41.1%
Coagulophathy	18	35.2%
Renal failure	6	11.7%
Wound infection	21	41.1%
Maternal Mortality	09	70.6%

30(58.8%), uterine atony 12(23.5%), placental abruption 6(11.7%) and placenta previa with increta 3(5.8%).

Table 3 showed the frequencies of various perioperative morbidity. All patients (51) were anaemic and required blood transfusion. Thirty six (70.5%) patient received in shock, 21 (41%) required ICU admission, 18(35.2%) develop coagulopthy, renal failure occurred in 6 and bladder injury in three cases, febrile illness in 36 (70.5%) and wound infection was seen in 21(41.1%)cases. The maternal mortality occurred in 9 cases (17.6%).

DISCUSSION

Emergency peripartum hysterectomy is usually undertaken for life threatening obstetric haemorrhege and is therefore considered as a 'near mis' event[7]. The frequency of EPH in this study is 0.31% (3.1/1000) which is slightly lower if compared to other Pakistani studies. Nisar N reported frequency of 0.42% from Hyderabad[2], from Karachi it is 0.68% and 0.56% reported from two different studies[3,10] Naz S et al reported Frequency of 0.55% from Larkana[4]. Begum I from Abbotabad reported frequency of 71% (1:139)[11]. From Lahore general hospital the reported frequency is 0.64%[12].

When compared to international literature the frequency is quite high. Yuceretal reported frequency of 0.29/1000 (0.29%) from Turkey[9]. Two different studies from the same country gave frequency of 0.37 13 and 0.66/1000[6]. The reported frequency from Saudi Arabia[14] and Kuwait[5] is 0.64 and 0.7/1000 respectively. From Netherland[15] and Crotio[16] it is 0.33 and 0.078/ 1000 deliverer respectively two different studies from Nigeria gave frequencies of 1.83[17] and 3.78/1000[18]. From india 0.26% which is comparable to our study[19].

The difference in the frequencies between developed and under-developed countries like Pakistan, Indian and Nigeria is due to low socio economic status, illiteracy, poor quality and access to emergency obstetric services and lack of awareness of the people regarding maternal health care.

Majority of the patient in this study were multi and grand multigravida and more than 30 year of age. Other studies also reported the similar results[2,3,4,5]. This shows poor access to family planning services and desire to bear more children leading to high parity which is a significant risk factor of EPH. Similarly emergency admission with no antenatal care is also high risk for EPH as evident in this study and supported by other studies also[6,10,11,17]. If the patients had routine antenatal follow up preventive measures could be taken to reduce EPH rate.

Although rupture uterus is a rare obstetric emergency in western countries, it is still alarmingly common in developed countries where it remains a major cause of maternal mortality and morbidity[20]. It is one of the main indication for EPH in our study this is like with other Pakistani studies[2,3,4] which reported the similar results. Two different studies from Nigeria[17,18] also reported rupture uterus as a major indication. This indicates wide spread ignorance about pregnancy and child bearing of our community.

The majority of rupture uterus in present study were caused by injudicious use of oxytocin, obstructed labour, late referral in case of prolonged labour, most of these patients were unboked, multi and grand multigravida, labour in the absence of skilled birth attendant. In most cases the uterus ruptured before admission in hospital, they were in shock and required massive blood transfusion. Laparotomy has to be performed followed by hysterectomy to save the lives of these patients.

Reports from the international literature showed abnormal placentation or morbidly adherent placenta to be the most frequent indication form EPH followed by uterine atony[5,6,13,14,15,16]. The authors were of the opinion that this might be due to increase C. section rate which led to increase rate of placenta previa and invasion abnormality. They suggested that C. section should be performed only for valid clinical indication.

It is reported in the literature that the incidence of EPH due to uterine atony has declined form 42% to 29.2%[2]. This may be due to other conservative approach to control bleeding form uterine atony like different prostaglandin preparation, uterine balloon tamponade, compression suture like B.lynch suture may avoid the need for hysterectomy[21] Subtotal hysterectomy was the preferred method of surgery in this review performed in all 51 cases. Both national[2,4,11,12] and international[13,17,19,22] literature recommend sub-total hysterectomy as procedure of choice as it is speedy, relatively bloodless and has minimum postoperative morbidily in already moribund patients.

The present study confirms the reports from other studies the EPH is associated with high maternal morbidly and mortality[2,3,17,18]. In majority of patients massive blood and blood products transfusion was needed. Seven patients required ICU admission. Other serious morbidities were coagulopathy, bladder injury and renal failure which were seen in 18, 3 and 6 patients respectively. Post-operative anaemia was observed in all patients as was fever and wound infection.

The maternal mortality rate in this study was 17.6% which is comparable to other studies conducted in Pakistan (Nisar N 19%[2], shah N 19%[10], Naz S, 14.2%[2]). However, this figure is quiet high in comparison to international literature[6,9,13,15,16]. A few studies are reported with no maternal mortality[23,24].

One study from Nigeria[17] reported a very high maternal mortality of 59.1% mainly because of bad pre-surgical clinical state of these patients rather than linked to the surgery itself, similarly to this study the nine maternal deaths occurred due to massive haemorrhage due to uterine atony, uterine rupture and severe abruption with coagulopathy rather than due to the procedure itself.

CONCLUSION

Frequency of EPH is high in this study. Lack of antenatal care, advanced age and high parity were main risk factor. Ruptured uterus remains the main indication for EPH.

Adoption of safe motherhood policies, early referral and presence of skilled birth attendant at delivery can reduce the incidence of Emergency Peripartum hysterectomy and associated morbidity and mortality. Peripartum hysterectomy will continue to occur in obstetrical preface. But improvement in surgical skills should be maintained so that each hysterectomy performed is a life saving procedure (All patients developed more than one complication therefore total exceed 100%).

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