

Emergency peripartum hysterectomy: experience of a tertiary care hospital in South India

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ABSTRACT

Emergency peripartum hysterectomy (EPH) has been described as the most dramatic operation in modern obstetric practice and a marker of severe maternal morbidity and near miss mortality. In the past, the most common indications for EPH were uterine atony and uterine rupture. However, recent studies suggest that abnormal placental adherence and placenta praevia are the major indications for EPH, probably due to increase in caesarean delivery rate. The present study was conducted to know the incidence, types and the indications for EPH and maternal outcome. This was a retrospective study conducted in a tertiary care hospital in South India in June 2014. The data was obtained from the medical records department from June 2011 to May 2013. During the period of study there were 9287 deliveries and 30 peripartum hysterectomies were performed, rate of 0.32%. Age ranged from 18-439 years with majority belonging to the 26-30 years age group. Most of the patients were of low parity i.e. Para 1 or 2, while 9% of them were grand multiparous. Unbooked case accounted for 53.3% of the total cases. Most common indication for hysterectomy was placenta accreta, extensive uterine rupture and uterine atony. Among patients with rupture, 60% of cases were unbooked and brought from peripheries in unstable condition with rupture uterus. All the admitted patients with rupture had a previous caesarean section. The most common complication was febrile morbidity, anemia and bladder injury. There was one maternal mortality due to septicemic shock. The average period of hospital stay was of 12 days, ranging from 7-41 days, the maximum stay was in case of septicemia. All urinary complications encountered were in patients with placenta accreta. Effective antenatal care, enhancement of blood transfusion facilities and improvement of surgeon skills are important to reduce the morbidity associated with the procedure.

Keywords: Peripartum hysterectomy, Uterine rupture, Placenta accreta, Unbooked

Introduction

Emergency peripartum hysterectomy (EPH) has been described as the most dramatic operation in modern obstetric practice and a marker of severe maternal morbidity and near miss mortality [1]. EPH is an uncommon obstetric procedure, usually performed as a life-saving measure in cases of intractable obstetric hemorrhage [2, 3]. Maternal mortality rate associated with emergency hysterectomy ranges from 0 to 30%, with the higher rates in regions with limited medical and hospital resources [4]. In the past, the most common indications for emergency peripartum hysterectomy were uterine atony and uterine rupture [5, 6]. However, recent studies suggest that abnormal

placental adherence and placenta praevia are the major indications for peripartum hysterectomy, probably due to increase in caesarean delivery rate [7, 8]. The factors responsible for higher incidence of obstetric hysterectomy in the developing countries are poverty, poor transportation facilities, erroneous cultural and religious beliefs, high incidence of unbooked pregnancies and poorly supervised deliveries [9]. Although emergency peripartum hysterectomy is usually performed to save the life of the mother, it can be associated with maternal mortality and also morbidity due to uncontrollable haemorrhage, delay in intervention, risks from blood transfusions, infection and disseminated intravascular coagulation particularly in the developing countries [9]. Very few reports have been published from the developing countries where this operation is performed more frequently, hence the present study was conducted to know the incidence, types and the indications for peripartum hysterectomy and maternal outcome.

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Material and methods

This was a retrospective study conducted in a tertiary care hospital in South India in June 2014. The data was obtained from the medical records department from June 2011 to May 2013. The following information was collected, socio-demographic characteristics of the patients, indications for the hysterectomy, type of hysterectomy performed, booking status of patients, mode of delivery, complications and type of surgery, gestational age at delivery and maternal

outcome. The data was recorded and analyzed using Microsoft Excel (2007 version). The results are explained in frequency and percentage.

Results

During the period of study there were 9287 deliveries and 30 emergency peripartum hysterectomies were performed, rate of 0.32%. The demographic characteristics of the cases is shown in table 1.

Table 1: Demographic characteristics of the participants

Parameter	N = 30
Age (Mean ± SD)	31.79±2.65
Gravidity (Mean ± SD)	4.16±1.2
Parity (Mean ± SD)	3.1 ±1.87
Period of gestation (weeks) (Mean ± SD)	36.23±3.1
Vaginal delivery	2 (6.6%)
Cesarean section	28 (93.3%)
Booking status	
Booked	7 (23.3%)
Unbooked	16 (53.3%)
Defaulted	4 (13.3%)
Referred	3 (10%)

Age ranged from 18-43 years with majority belonging to the 26-30 years age group. Most of the patients were of low parity i.e. Para 1 or 2, while 9%

of them were grandmultiparous. Unbooked case accounted for 53.3% of the total cases.

The indications for peripartum hysterectomy are shown in table 2.

Table 2: Indications for peripartum hysterectomy

Indication	N (%)
Placenta accreta	11(36.6)
Extensive uterine rupture	7 (23.3)
Severe uterine atony	6 (20)
Placenta praevia	2 (6.6)
Grossly infected uterus	2 (6.6)
Multiple uterine fibroid	1 (3.3)
Cervical fibroid	1 (3.3)

Most common indication for hysterectomy was placenta accreta, extensive uterine rupture and uterine atony. Among patients with rupture, 60% of cases were unbooked and brought from peripheries in

unstable condition with rupture uterus. All the admitted patients with rupture had a previous caesarean section.

The maternal and neonatal complications are shown in table 3.

Table 3: Maternal and neonatal complications

Complication	N (%)
Bladder injury	4 (13.3)
Anemia	7 (23.3)
Post-operative wound sepsis	4 (13.3)
Maternal mortality	1(3.3)
Febrile Morbidity	11(36.6)
Neonatal admission to ICU	5(16.6)
Ureteric injury	2 (6.6)
Pulmonary oedema	1(3.3)
Mild-to-severe coagulopathy	1(3.3)
Perinatal mortality rate	11/30 (36.6)

The most common complication were febrile morbidity, anemia and bladder injury. There was one maternal mortality due to septicemic shock. The entire rupture uterus resulted in perinatal mortality. The average period of hospital stay was of 12 days, ranging from 7-41 days, the maximum stay was in case of septicemia. All urinary complications encountered were in patients with placenta accreta.

Discussion

Emergency peripartum hysterectomy (EPH), although rare in modern obstetrics, remains a life saving procedure in cases of severe hemorrhage [10]. In the present study the incidence of EPH was 0.32%. Other studies have reported incidence ranging from 0.24 to 5.09 per 1,000 deliveries. In the United States, it is performed in 0.05 to 0.1 percent of all deliveries and 0.5 percent of cesarean deliveries [11] and similar results have been reported also in Canada and in Europe. In India the reported incidence is in the range of 0.04% to 0.35% [12-15]. This variation may be due to geographical variation and different demographic characteristics. Most common indication for hysterectomy was placenta accreta, extensive uterine rupture and uterine atony. Other studies have found uterine atony and rupture uterus as the most common indications [12-15], findings from developed countries

list placenta praevia and morbidly adherent placenta as the most frequent indications [16, 17]. The most common complication were febrile morbidity, anemia and bladder injury, the results are similar to other studies [12-15]. Postoperative complications as febrile morbidity, wound infection, bladder injury, septicemia, were comparable to other studies [12-15]. There was one maternal death (3.3%), other studies have reported maternal deaths from zero to 10% [12-15]. The perinatal mortality was 36.6%, which is lower when compared to other studies conducted in developing countries [18-20]. All the rupture uterus resulted in perinatal mortality. Regarding type of hysterectomy performed, subtotal hysterectomy (76.6%) was performed more frequently than total abdominal hysterectomy, similar to other studies [8, 18, 21]. Subtotal hysterectomy (STH) is a much faster and technically safer procedure for desperately ill patients and those who may have massive adhesions over the lower uterine segment involving the urinary bladder. The choice between subtotal and total hysterectomy has long been debated. Total hysterectomy is the preferred surgical method due to the potential risk of malignancy developing in the cervical stump. However, proponents of subtotal hysterectomy report lesser blood loss, reduced operating time and reduced intra and postoperative

complications [22]. Studies have shown that both types of hysterectomies are comparable with regards to blood loss and complication rates rupture [23, 24]. Although emergency peripartum hysterectomy is life saving, the complications associated with it should not be underemphasized. The results of the present study confirm the previous observations that EPH is associated with high operative and postoperative complications rates. There are numerous risk factors that can contribute for this entity and recognizing and assessing patients at risk is very important. These type of studies will help in determining the epidemiological pattern of EPH and will help in effective management.

Limitations of the study

The data was collected from only two years and the study was conducted in only one region. Future studies should be multicentric and include a large sample size.

Conclusion

The incidence of emergency peripartum was 0.32%, majority of the complications occurred in unbooked cases. Most common indication for hysterectomy was placenta accreta followed by extensive uterine rupture and uterine atony. Effective antenatal care, enhancement of blood transfusion facilities and improvement of surgeon skills are important to reduce the morbidity associated with the procedure. Caesarean delivery should be performed only when exclusively necessary, in appropriate clinical settings and by experienced surgeons when such risk factors are identified

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