

Emergency Peripartum Hysterectomy

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Abstract

Objective: To determine the frequency of peripartum hysterectomy, its indications and associated maternal and perinatal morbidity and mortality.

Study Design: Prospective observational analytic study.

Place and Duration of Study: The study was conducted at the Department of Obstetrics and Gynaecology Unit-I, Jinnah postgraduate Medical Centre (JPMC) from January, 1st 2010 to December, 31st 2010.

Methodology: All patients who underwent peripartum hysterectomy at JPMC, during one year were studied regarding their age, parity, booking status, indication and type of operation performed. Maternal and foetal morbidity and mortality were also recorded.

Results: During a period of one year, 21 hysterectomies were performed for peripartum indications; the frequency of peripartum hysterectomy was 1 in 358 (0.27%). The major indications were ruptured uterus in 14 (66.7%) and severe postpartum hemorrhage due to atony of uterus in 4 (19.0%) patients. Other indications included severe hemorrhage due to placenta accreta in 2 (9.5%) patients and abruptio placenta was seen in 1 (4.7%). Infection was the commonest complication seen in 2 (9.5%) of the patients. There were 2 (9.5%) maternal deaths and 14 (66.7%) perinatal deaths.

Conclusion: Emergency peripartum hysterectomy remains a necessary tool for a consultant obstetrician. Obstetricians well trained to handle such an emergency and who act at the optimal time with clear judgment are ideal for this purpose. Using surgical technique with speed can reduce morbidity and mortality rates in such cases.

Keywords: Peripartum hysterectomy, Uterine rupture, Uterine atony, Maternal morbidity and mortality.

Introduction

Emergency peripartum hysterectomy is the removal of uterus at the time of caesarean section, following caesarean section, immediately after vaginal delivery or in the period of puerperium in order to save maternal life.¹

Peripartum hysterectomy in the developed world is mainly done for gynaecological indications such as sterilization and leiomyoma in peripartum practice but in developing countries it is usually done for the situations where conservative measures fail to control haemorrhage.²⁻³ In the past the most common indications were haemorrhage and ruptured uterus.⁴ Recent reports show that abnormal placental adherence of placenta praevia is emerging as a major indication for peripartum hysterectomy and is most likely related to increase in the number of caesarean deliveries observed over the past two decades.⁴⁻⁵

Emergency peripartum hysterectomy is associated with severe blood loss, intra-operative complications and significant postoperative maternal morbidity and mortality. The high incidence of maternal mortality and morbidity is reported from developing countries.⁶ Peripartum hysterectomy can save many maternal lives but requires proper judgment and expertise.

The purpose of the present study was to determine the frequency, indications, maternal and perinatal mortality and morbidity associated with emergency peripartum hysterectomy at a tertiary care hospital.

Methodology

The department of obstetrics and gynaecology is the busiest department of JPMC, admitting over 16000 cases annually. Nearly 8000 deliveries are conducted each year, of which more than 80% are

non-booked. This study recruited patients from 1st Jan. to 31st Dec, 2010. Patients who came in emergency were mainly referred from small clinics, hospitals, maternity homes and traditional birth attendants, after taking long trial of labour. Others were admitted with the diagnosis of ruptured uterus during labour or came due to postpartum haemorrhage.

All patients who underwent peripartum hysterectomy during that year were studied in detail regarding their age, parity, booking status and the indication of peripartum hysterectomy. The type of operation performed and maternal and foetal morbidity and mortality were also recorded.

Results

During the study period 7,537 patients were delivered in the department, amongst them 5,900 were vaginal deliveries and 1,637 were caesarean sections. A total of 21 (0.27%) peripartum hysterectomies were performed during the study period. Six (28.61%) followed vaginal deliveries and 15 (71.4%) were done during the course of, or following Caesarean sections.

The frequency of peripartum hysterectomy was 1 in 358 (0.27%) of all deliveries. Among 5,900 vaginal deliveries, it was 0.35% or 1 in 280 deliveries and among 1637 Caesarean sections, it was 1.28% or 1 in 78 caesarean sections.

All patients were non-booked, were referred from other clinics and belonged to low socio-economic class. Their age ranged between 20 to 46 years with a mean age of 30.2 years. Parity ranged from 1-13, with a mean of 5.6. Eleven (52.4%) of the patients were grandmultipara.

All operations were total abdominal hysterectomies with conservation of either one or both ovaries and were performed by consultant obstetricians or by experienced Senior Registrars. All patients required blood transfusion. A minimum of 2 units and maximum of 14 units of blood were transfused according to requirement.

Fourteen (66.7%) patients underwent hysterectomy for ruptured uterus. All patients with rupture of unscarred uterus were grand multiparas. Five patients had rupture of the previous caesarean section scar. Table I shows the detailed indications for peripartum hysterectomies. Four women had hysterectomy due to uterine atony that failed to respond to conservative treatment. Two women underwent hysterectomy due to placenta accrete. These patients had a uterine scar from previous 2 or 3 lower segment caesarean sections. In the last (one) patient, abruptio placentae (couvelaire uterus); associated with hypofibrinogenaemia requiring large quantities of blood and blood products before and during surgery; was the indication.

Table I. Indications for Peripartum Hysterectomy (n=21)

Indications	No. of patients	Percentage (%)
Ruptured uterus	14	66.7
Oxytocin injection	(6)	(28.6)
Obstructed labour	(3)	(14.3)
Previous LSCS	(5)	(23.8)
Postpartum haemorrhage (uterine atony)	4	19.0
Placental abnormalities	3	14.3
Placenta Accrete	(2)	(9.5)
Abruptio placentae	(1)	(4.7)

Infection was the commonest complication seen in 2 (9.5%) patients.

There were 2 (9.5 %) maternal deaths in the immediate post-operative period due to irreversible haemorrhagic shock following uterine rupture.

Perinatal outcome is shown in Table II. All perinatal deaths were still births.

Table II. Perinatal Outcome (n=21)

Foetal Outcome	Number	Percentage (%)
Perinatal Deaths	14	66.7
(Ruptured uterus)	(13)	(62)
(Abruptio placentae)	(01)	(4.7)
Alive and Well	07	33.3

Discussion

In this study the decision to perform emergency peripartum hysterectomy was easier in highly parous women, unlike the low parity women, where this decision was difficult to make, to save the women's life. Being a tertiary care center where mostly complicated cases are received, the frequency of emergency peripartum hysterectomy is 0.27%. This is comparable to the frequency reported from Bahawalpur (Pakistan) but low in comparison to reported frequency from Peshawar and Hyderabad.⁷⁻⁹ The frequency of peripartum hysterectomy in this institution is almost the same as was reported in 1995 i.e. 0.3%.¹⁰

Majority of patients who underwent hysterectomy were multiparas. Similar trend was observed by Nusrat and Ahmed.^{9,11}

The most frequent indication for peripartum hysterectomy in the present study was ruptured uterus (66.7%) followed by uterine atony (19.0%), morbid adherent placenta and uncontrollable

bleeding from placental bed. The similar results were reported by different studies from Pakistan.^{7,12} The indications were almost the same, while the most frequent indications reported from the developed countries were morbid adherence of placenta and uterine atony.^{13,14} There is significant change in the indications of peripartum hysterectomy over the period of time from one region to another. In the present series, spontaneous extensive rupture of unscarred uterus, due to obstructed labour, disproportion, grandmultiparity and injudicious use of oxytocin distorts the anatomy to an extent that leaves hysterectomy as the only option. This fact highlights the problems which were present in our society like illiteracy, poverty, lack of antenatal care and poor access to maternal health care services. Uterine atony was the second commonest indication for peripartum hysterectomy. All patients in this group received oxytocin infusion, misoprostol, ergometrine and intrauterine packing before embarking upon hysterectomy.

The dangerous combination of placenta praevia, morbid adherent placenta and previous caesarean section is also found in this study. This combination is also reported from other studies.¹⁵ It is reported in the literature¹⁶ that the incidence of peripartum hysterectomy due to uterine atony had decline from 42% to 29.2% and incidence due to abnormal placentation increased from 25.6% to 41.7%. Another study reported that the incidence of morbid adherent placenta has been increased from 0.5% to 3.9%¹⁷ and well known risk factors for morbid adherent placenta are placenta praevia and previous caesarean birth. Emergency peripartum hysterectomy has been recommended as a life saving procedure for morbid adherent placenta.

Total hysterectomy was the commonly performed surgery in this study. This is in contrast to other studies reported from different cities of Pakistan, where subtotal hysterectomy was common.^{7,9,11}

The present study confirms the previous observations that emergency peripartum hysterectomy is associated with high maternal morbidity and mortality.^{7,8} The overall total maternal morbidity of puerperal sepsis in this study was 9.5%, sepsis was more common as compared with other studies.^{12,18}

There were 2 (9.5%) maternal deaths in this study which is lower than the other reported studies from Pakistan,^{7,8} but very high in comparison to developed countries.¹⁶ Inadequate transportation, mishandling by dais and doctors in the periphery and late presentation were the main causative factors for deaths. These deaths were due to severity of the problem for which hysterectomy was indicated rather than the procedure itself. A survival of 90% is attributed to meticulous technique, good anaesthesia, and judicious blood transfusion despite the poor conditions necessitating hysterectomy.¹⁹

The perinatal mortality in this series was 66.7% and the most common cause was ruptured uterus. This is similar to the other studies.²⁰

Conclusions

Emergency peripartum hysterectomy remains a necessary tool for a consultant obstetrician. Obstetricians; well trained to handle emergency, who act at the optimal time with clear judgment, using timely and good surgical technique; can reduce mortality and morbidity in such patients.

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