

INEVITABLE PERIPARTUM HYSTERECTOMY IN A TROPICAL HOSPITAL: INDICATIONS AND MATERNOFETAL OUTCOME

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ABSTRACT

Objectives: To determine the indications for inevitable peripartum hysterectomy (IPH), associated demographic variables and the materno fetal outcome.

Methodology: A retrospective analysis of twenty two patients that had inevitable peripartum hysterectomy (IPH) during the study period of 4 years, July 2001 to June 2005.

Results: The mean age of the patients was 32.4 years with a range of 18 to 47 years. The parity ranged from 1 to 9. The parity distribution was positively skewed indicating the rate of IPH increased with parity. Sixteen (72.7%) patients did not have antenatal care and 21(%) out of the 22 patients were referred from other health facilities. Indications for IPH were ruptured uterus in 16(72.7%) patients, uterine atony in 4(18.2%) patients. Of the 22 patients, 15 (68.2%) delivered per abdomen while 7(31.8%) delivered per vagina. The indications for abdominal delivery were laparotomy for ruptured uterus with extraction of the fetus in 11 (50%) patients and caesarean section in 4(18.2%) patients on account of placenta praevia in 2 patients. Of the 7 patients that delivered per vaginam, 3(13.6%) had spontaneous vertex delivery, 1(4.5%) had vacuum delivery, 2(9.1%) had breech extraction of second twin and 1(4.5%) patient had embryotomy. Subtotal hysterectomy was the most commonly performed type of hysterectomy in 17(77.5%) of the cases. High maternal mortality of 59.1% and perinatal mortality of 77.3% was recorded in the study.

Conclusion: Ruptured uterus which is associated with poor pre-surgical clinical state was the leading indication for IPH in this study. This may be responsible for the high maternal and fetal mortality recorded in this study and not necessarily the hysterectomy procedure itself.

KEY WORDS: Peripartum, Hysterectomy.

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INTRODUCTION

In Nigeria and some other black African countries, hysterectomy is not a widely accepted operation due to the persistent cultural bias to accept absence of the uterus and subsequent family limitations with amenorrhea. The obstetrician will only resort to hysterectomy in the peripartum period where it becomes inevitable.

In most developing countries, the maternal and child health care delivery system are poorly developed. Health data indicating the quality of maternal and child health in Nigeria, confirmed high figures. Contributing to this high figures are poverty and poor

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infrastructural facilities in a nation with a fast growing population without the appropriate means and effective strategy to cope with the situation.

Inevitable peripartum hysterectomy (IPH) is an emergency live saving operation that is mostly performed in cases of intractable obstetric hemorrhage.¹ In Nigeria, obstetric hemorrhage is amongst the three leading causes of maternal mortality and morbidity like other developing countries.² Ruptured uterus, is a cause of obstetric hemorrhage and one of the dreaded complications of pregnancy to which a woman maybe subjected to,³ ruptured uterus was the leading indication of IPH in the developed world before 1980,⁴ and it was associated with high fetal mortality.⁵ However, recent studies emanating from developed countries, found placenta accereta as the most common indication for emergency peripartum hysterectomy (EPH).⁴ This is due to the increasing caesarean section rate and the more successful conservative treatment of uterine atony. Against this background, we evaluated the indications for IPH and the maternofetal outcome in a tropical hospital.

PATIENTS AND METHODS

During the period between July 2001 and June 2005 twenty two cases of IPH were done in the obstetric unit of the Ahmadu Bello University Teaching Hospital, Kaduna. Their case files were retrieved and their medical records reviewed. The study was a retrospective analysis of twenty two patients that had IPH, which was defined as emergency hysterectomy performed in the third trimester of pregnancy, during labour and after delivery because of obstetric haemorrhage.

The time interval between diagnosis and surgical intervention was determined by the speed and effectiveness of resuscitation, availability of funds for treatment, availability of operating space in the operating theatre, availability of blood for transfusion and the efficiency of call network for the medical team. A good number of the unbooked patients were caught up in one or more of these problems

resulting in delay in operative intervention. For the purpose of this review, unbooked patient are those patient that did not register and attend our antenatal clinic.

RESULTS

The records of 22 patients that had IPH was analysed. The mean age was 32.4 years with a range of 18 to 47 years, and the parity ranged from para one to para nine. The parity distribution was positively skewed, indicating the rate of IPH increased with parity. A significant percentage (72.2%) of the patients were unbooked for antenatal care; they were referred. Using the last menstrual period or previous sonogram, 68.2% of the pregnancies were term. The gestational age ranged from 35 to 42 weeks.

Table-I: Profile of Patients

	N = 22	Percentage
<i>Age (Years)</i>		
15 – 19	1	4.5
20 – 24	2	9.1
25 – 29	4	18.2
30 – 34	7	31.8
35 – 39	5	22.7
>40	3	13.6
<i>Mean age</i>	32 years	
<i>Parity</i>		
0	0	0
1	2	9.1
2	2	9.1
3	3	13.6
4	7	31.8
>5	8	36.4
<i>Gestational period at delivery</i>		
Preterm	4	18.2
Term	15	68.2
Post term	3	13.6
<i>Previous uterine scar</i>		
Previous caesarean section scar	5	22.7
Previous myomectomy scar	2	9.1
No previous scar	15	68.2
<i>Antenatal care booking status</i>		
Booked	6	27.3
Unbooked	16	72.7

Of the 22 patients, 68.2% had no previous scar, 27.2% had previous caesarean section scar and 9.1% had previous myomectomy. Rupture of the pregnant uterus was the leading indication for IPH in this study, with a percentage of 72.7%. This was distantly followed by uterine atony (13.6%) and placenta praevia accreta in 4.5% of cases.

Mode of delivery shows that 11(50%) patients had abdominal delivery of partially or completely extruded from the ruptured uterus, 4(18.2%) patients had caesarean section and 3 (13.6%) patients had spontaneous vaginal delivery. Other mode of deliveries recorded were vacuum delivery (4.5%) breech extraction (9.1%) and embryotomy in 1 (4.5%) patients. The indications for the caesarean section were placenta praevia in two cases, fetal distress, one case and two previous caesarean section in one patient.

Overall, 15(68.2%) patients had hysterectomy done following abdominal delivery of

Table-II: Indications, mode of delivery and type of hysterectomy performed

Indications	N = 22	Percentage
Ruptured uterus	16	72.7
Uterine atony	4	18.2
Placenta praevia and placenta accreta	2	9.1
<i>Mode of delivery</i>		
<i>Vaginal Delivery</i>		
Normal vaginal delivery	3	13.6
Vacuum delivery	1	4.5
Breech extraction (second twin)	2	9.1
Embryotomy	1	4.5
<i>Abdominal delivery</i>		
Caesarean section	4	18.2
* Placenta praevia	2	
* Fetal distress	1	
* 2 previous caesarian	1	
Laparotomy for ruptured uterus	11	50.0
<i>Type of hysterectomy</i>		
Subtotal	17	77.3
Total	5	22.7

* – Indications for caesarean section and number.

fetuses while 7(31.8) hysterectomies followed vaginal deliveries. Subtotal hysterectomy was the commonly performed type of hysterectomy, done in 77.3% of cases. In this review, the maternal mortality was 59.1%, all due to complications arising from severe haemorrhage. The leading causes of maternal morbidity including in patients that later died, were haemorrhage / anemia, puerperal pyrexia and wound disruption. Perinatal mortality of 77.3% was recorded, perinatal morbidity were mainly sepsis, anemia, asphyxia and jaundice.

DISCUSSION

Hysterectomy in the peripartum period is a rare, but life saving emergency operation that is associated with both intra and post operative complications. In our society where the emphasis is towards a large family and menstrual function is of paramount importance, peripartum hysterectomy is not done to unless it becomes inevitable. The incidence of IPH in this review is 1.83/1000 births, this is in line with reported incidence from the United States which ranged from 1.2 to 2.7 per 1000 births,^{7,8} but on the contrary, our incidence is high compared to figures emanating from some European countries. The incidence in Ireland⁹ and Norway¹⁰ are 0.3/1000 births and 0.2/1000 births respectively. The wide disparity in the incidence of IPH between the United States and some European countries may be explained by the high caesarean section rate in the United States which predisposes to placenta praevia and placenta increta, which are now the leading indications for IPH in the developed countries.^{4,6,7} This disparity can be further substantiated by similarity in the incidences of IPH following vaginal delivery in the European and United States studies.^{4,6,8}

In this study, the incidence of IPH following caesarean section was 0.5/1000 births, this is low compared with 1.6/1000 births reported in the Netherlands.¹ However, we found our incidence of 0.41/1000 births for IPH after vaginal delivery to be high compared with figures between 0.1/1000 births and 0.3/1000

Table-III: Clinical outcome of inevitable emergency peripartum hysterectomy

<i>Maternal outcomes</i>	<i>N = 22</i>	<i>Percentage</i>
Maternal mortality	13	59.1
Maternal morbidity		
Anaemia /	18	81.8
Haemorrhage		
Bladder injury	7	31.8
Puereral pyrexia	16	72.7
Ureteric injury	1	4.5
Paralytic ileu	2	54.5
Oliguria	6	27.3
Cardiac arrest	2	9.1
Cortical blindness	1	4.5
Coagulopathy	7	31.8
Wound disruption	12	54.5
<i>Neonatal outcomes</i>	<i>N = 22</i>	<i>Percentage</i>
Perinatal deaths	17	77.3
Neonatal morbidity		
Neonatal sepsis	15	68.2
Anaemia	12	54.5
Neonatal jaundice	11	50.0
Neonatal asphyxia	13	

births quoted for the United States and some European countries.^{4,6,8} These findings can be best explained by the intense aversion among many in Africa to surgical deliveries¹¹ and the preference to try vaginal delivery especially in our society where desire and emphasis is to have many children.¹² This has led to our low caesarean section rate with consequential high morbidity and mortality following vaginal births due to poorly developed emergency obstetric care service in a society where majority of the pregnant women are not supervised in pregnancy, labour and delivery.

Interestingly, in the developed countries, placenta accereta is the most common indication for IPH,^{13,14} while ruptured uterus which was one of the two leading indication for IPH up till the 1980's in the developed countries, is the leading indication of IPH in our review. In most of the patients, the uterus ruptures before the patients arrives in the hospital¹⁵ and they present in a moribond state with the fetus already partially or completely extruded into the peritoneal cavity. The situation is usu-

ally made worse due to lack of promptness in resuscitative and definitive management as a result of financial constraints and availability of blood for transfusion.

Subtotal hysterectomy was the commonly performed surgery in this review, as was in other studies.^{3,16} In patients that had rupture of gravid uterus which was the commonest indication in this review, subtotal hysterectomy is said to be a safer procedure and may be quicker.³ It is associated with less post operative morbidity since the infected and torn uterus is removed.^{3,16}

Though IPH is associated with high maternal mortality and morbidity, maternal mortality of 59.1% recorded in this study as against 4% reported in a similar study by Anneka Kwee,¹ may not be directly linked to the surgery itself but rather to the bad presurgical clinical state of these patients with ruptured uterus at presentation. Ghatak³ in his review of 163 cases of ruptured uterus in Northern Nigeria recorded an over all maternal mortality of 46.5%, which is similar to the figure recorded in this study where uterine rupture was the dominant indication for IPH.

The perinatal death of 77.3% recorded in this review is high compared to 6.3% reported in a study in the Netherlands.¹ This can be attributed to ruptured uterus being the commonest reason for IPH and delay in seeking and getting medical intervention at the three levels. In various studies of ruptured uterus which was the main indication for peripartum hysterectomy in this study, Ghatak³ and Groene¹⁷ reported high perinatal mortality of 93% and 100% respectively, while Makinde, et al¹⁸ reported low survival rate of 17.6%, which are all comparable to figures in this study.

It is note worthy from this study that the maternal and perinatal mortality following IPH is greatly influenced by the leading indication for IPH which is ruptured uterus and not the surgery itself. This may explain the wide disparity in the figures from developed countries and our study.

Ruptured uterus is a significant contributor to maternal mortality in Nigeria, with percent-

age contribution ranging from 28.2% to 31.9% in studies.^{19,20} In order to decrease the incidence of IPH and reduce maternal mortality, conscious effort should be targeted towards the prevention and prompt management of cases of ruptured uterus. This can be achieved by provision and improvement in maternal care service, availability of blood transfusion services and accessibility to health care facilities via provision of good roads, transportation, communication services and alleviation of poverty and eradication of illiteracy. However, these can only be a reality if the issue is given due recognition and it is backed up by appropriate political will to re-order priorities in resource allocation without resulting to expensive measures or complex technology.

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