Emergency Laparotomy for Peripartum Haemorrhage in Bida North Central Nigeria.

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Abstract

Context: Despite widespread reports on the incidence and problems of obstetric haemorrhage in developing countries, every tertiary institution must continue to review the problem discuss and advocate preventive measures.
Objective: To assess the predisposing factors and study the surgical management of peripartum haemorrhage in Bida, North Central Nigeria.
Design: Prospective Review of Cases
Setting: Federal Medical Centre, Bida, Niger State, Nigeria
Subject: All patients with peripartum haemorrhage (ruptured gravid uterus and uncontrollable post partum haemorrhage) that needed emergency laparotomy between 1st June, 2000 31st May, 2004.
Methods: A detailed history including biosocial and possible predisposing factors to peripartum haemorrhage at presentation were obtained. The indications, findings, type of surgery performed at laparotomy and post operative morbidity/mortality indices were studied.
Results: Most of the patients (92.68%) were unbooked and they all presented in *extremis*. The post-operative morbidity rate was 81.58%, perinatal mortality was 92.68% while the maternal mortality was 12.20%.
There were no statistically significant differences in morbidity and mortality indices in patients who had subtotal hysterectomy and repair of ruptured gravid uterus ± sterilization.
Conclusion: The type of surgery (subtotal hysterectomy or repair of ruptured gravid uterus) performed on these patients does not affect the prognosis. Good antenatal care and adequate labour supervision are still the keys to prevention.

Key Words: Subtotal Hysterectomy; Ruptured gravid uterus; Sterilization; Peripartum haemorrhage.

Introduction

Obstetrics practice in the developing countries is still developing! It is therefore beset with varying basic and preventable problems of lack of antenatal care, high parity and poor facilities. One of the results of these problems is obstetric haemorrhage and this contributes to 60% of maternal mortality in developing countries[1]. The peri-partal causes of obstetric haemorrhage especially rupture of gravid uterus and uncontrollable post partum haemorrhage constitute the majority[2] and are rapidly life threatening in their presentations and management[3].

These peri-partal problems have been practically eradication in developed countries such that emergency operations on gravid uterus are related to pre-existing gynaecological problems such as uterine fibroids, carcinoma of the cervix and ovarian malignancies[4]. This study examines these peri-partal haemorrhages and focuses on the operative interventions per abdomen. It also suggests ways to prevent these obstetric catastrophes.

Materials and Methods

Between 1st June, 2000 to 31st May 2004, patients with peri-partal obstetric haemorrhage who needed emergency laparatomy at Federal Medical Centre Bida, Nigeria were selected and studied. Federal Medical Centre, Bida is the only tertiary/referral health institution Niger State, and Bida is a semi-urban/rural town in Niger State. All those patients whose haemorrhage were controlled by vaginal procedures/operations were not considered. Caesarean section operations were also not considered. All the laparotomies were performed by either of the two consultant obstetrician on ground. A detailed history to elicit the possible predisposing factors to peripartum heamorrhage was obtained.

All the findings e.g. site, type of rupture other reasons for uncontrollable haemorrhage and total blood loss at surgery were noted. The type of surgery and the reasons for not tying the Fallopian tubes were noted and recorded. The patients were then followed up on the post-natal ward for the number of days spent in the hospital, wound infection, blood transfusion, other post-operative morbidity indices and maternal deaths.

Results

There were forty-one (41) cases of peri-partal haemorrhage that needed emergency laparatomy during the period. Thirty-eight (38) patients had ruptured gravid uterus and the remaining three patients had uncontrollable post-partum haemorrhage (uterine atony from previous caesarean section (c/s), post c/s for

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placenta praevia type III[B] and morbidly adherent placenta). The total number of deliveries during the period was 4644 (four thousand six hundred and forty-four). Twenty-two patients had subtotal hysterectomy giving an incidence of 1 in 211 deliveries.

The mean age of the patients was 32 ± 2.8 years. Twenty-seven patients (65.85%) were aged 31 39 years); 11(26.83%) were in the age ranged 41 49 years; and 4(9.76%) were aged 21-29 years. The range of parity for the patients was 0-9 (median 4). Twenty-three patients (56.10%) were of parity 5 9; 18(43.90%) were of parity 1 4 and one patient was nulliparous. Thirty-eight (92.68%) of all the patients studied were unbooked at presentation. Only three (3) patients were booked.

Table 1 shows the possible predisposing factors to peripartum haemorrhage at presentation.
The main contributory factors were grand multiparity, previous Caesarean section scar and injudicious use of oxytoxics occurring either singly or jointly.

Reasons for Conservation of the Fallopian Tubes

1. Two (2) patients were Para 2 (no surviving issue), their babies died during childhood.
2. One (1) patient was Para 2 (no surviving issue). She is now re-married.
3. One (1) patient was Para 3 (no surviving issue). She had 2 babies with childhood deaths and one with perinatal death.
4. Two (2) patients were Para 1 (no surviving issue). One had a childhood death while the other had a perinatal death.

Most patients with antero and posterolateral uterine wall ruptures had subtotal hysterectomy while those with anterior wall rupture of the uterus had mostly Repair ± sterilization. Two (2) of the patients in the repair of uterus group developed vesico-vaginal fistula post-operation. They were conservatively managed by resting the bladder for 6 weeks. The overall post-operative morbidity rate was 81.58%. All the patients had at least one unit of blood transfused. There were 5 maternal deaths giving a maternal mortality rate of 12.20%.

Two patients died from hypovolaemic shock, one intra operatively and the other post-operatively on the 7th day. Three patients died from septicaemia on 2nd, 4th and 9th post-operative days respectively. Fetal loss in ruptured gravid uterus was 100% in all. All the three babies from intractable uterine atony had been delivered alive.

Discussion

The principal findings of the study are:

1. Severe peripartum haemorrhage requiring expert and experienced hands in laparotomy ± subtotal Hysterectomy occurs often in this region (1 in 113 deliveries) and most likely in many such rural semi-urban communities in Nigeria and sub-saharan Africa. The incidence of emergency subtotal hysterectomy alone in this study is 1 in 211 deliveries.
2. Most of these patients (92.68%) were unbooked. Home delivery is very prevalent in this community because of strong cultural and traditional practices.
3. There were no statistically significant differences in maternal morbidity and mortality indices in the two types of surgeries performed in these patients.

This study is a prospective review of severe peripartum haemorrhage cases and a study of their surgical management per abdomen. Many other causes e.g. placenta praevia (antepatum haemorrhage) that require caesarean section as well as those that require vaginal operations and procedures were not considered. The qualification for consideration of cases into this study i.e. severe peripartum haemorrhage was not clarified, only clinical judgements were used.

The incidence of emergency subtotal hysterectomy in this study is high compared to 1 in 392 and in 1 in 647[5] deliveries. The selection of cases (clinical judgement) and surgical management in these studies are similar thus underscoring the fact that obstetrics practice in Nigeria has not really improved. In this study, we considered the theoretical facts that total hysterectomy requires more surgical operation time and more surgical technicalities (affecting morbidity and mortality rates) as well as the need for continuing menstruation especially in these our rural patients in doing subtotal hysteratomy[2]. These theoretical facts have been found to be statistically insignificant in both morbidity and mortality rates[5] especially where a lower cadre of surgeons (Registrars) performed the surgeries[3]. Total Hysterectomy however avoids stump carcinoma[5] and additional colporrhexis which could have been missed is diagnosed and repaired[6].

Ruptured gravid uterus was the commonest diagnosis in these patients. It is caused Grandmultiparity, lack of quality antenatal case and inadequate labour supervision are the main reasons in this study why the possible predisposing factors were not dealt with appropriately. The reasons highlighted for conservative management (repair of ruptured gravid uterus without sterilization) are genuine in an African setting like ours because of:

i) attitudes of the society to the conservation of fertility
ii) the size of the families
iii) The sex of the children
iv) The high mortality of children[7].

Table 1:
Possible Predisposing Factors to Peripartum Haemorrhage at Presentation

Possible Predisposing factors to Peripartum Haemorrhage		Number	Percentage (%)
a)	Use of oxytocic (injudicious)	7	17.07
b)	Previous Caesarean Section	9	21.95
c)	Grand multiparity (Parity ≥ 5)	12	29.27
d.)	No factor identified	3	7.32
e)	Other previous surgeries on uterus	-	-
f)	Abnormal lie of the fetus/Injudicious obstetric manipulations	3	7.32
g)	Multiple factors (a) + (b)	2	4.83
	(b) + (c)	3	7.32
	(a) + (c)	2	4.88
Total		**41**	**100.0**

Table 2:
Comparison of Sub-Total Hysterectomy and Repair of Ruptured Gravid Uterus

Variable	Repair ± Sterilization	Sub-Total Hysterectomy	P-value
Number of cases (%)	19(46.34)	22(53.66)	-
Mean duration of surgery ± S.D. (Mins).	93.52 ± 89.21	132.63 ± 43.79	0.104 (N.S)
Mean blood loss (mls) during surgery ± S.D.	1557.89 ± 194.59	1818.42 ± 766.07	0.460 (N.S)
Mean number of days spent in the hospital ± S.D.	10.63 ± 2.97	9.84 ± 4.45	0.527 (N.S)
Bladder injury (%)	11(57.89)	9(40.91)	N.S.
Vesico-vaginal fistula (%)	2(10.52)	0(0.00)	N.S.
Wound Infection (%)	9(47.37)	12(54.55)	N.S.
Blood transfusion (%)	19(100.00)	22(100.00)	N.S.
Hypovolaemic shock (%)	1(5.26)	2(9.10)	N.S.
Septicaemia (%)	2(10.53)	3(13.64)	N.S.
Maternal Death (%)	2(10.53)	3(13.64)	N.S.

NS - Not significant

The absolute statement of Etienne Tarnier (1897). "If a woman in the battle to reproduce her race has ruptured her uterus, she should be invalided from the service, for it is not with cripples that an army takes the field" may not therefore be acceptable in an African setting. Relatives (educated ones), social workers, career. The general practitioners and the Gynaecologist constitute an interdisciplinary team to participate in the decision to sterilize[8]. Non-Hysterectomy ways of managing these severe peripartum hemorrhage include uterine packing with guaze or Sengstaken-Blakemore tube with ballon/Foley cather with large bulb, Ligation of internal Iliac artery and stepwise uterine devascularisation[9].

Routine use of oxytocics (Active Management of third stage of labour) reduce the risk of post-partum haemorrhage by over 40%[9,10]. This step in addition to widespread obstetric services, liberal use of contraception with reduction in family size, adequate antenatal care and adequate labour supervision have made peri-partal haemorrhage a solved problem in developed countries[11].

The overall meaning of this study and implications are:

1) The need for capacity building by the various medical post graduate training schools to handle these problems especially in the rural area.
2) Our policy makers must legislate and enforce organized antenatal care and proper labour supervision in health institutions for all pregnant women. There must be adequate provision of funds for research in maternal mortality so that Nigeria can meet the 75% reduction in Maternal Mortality she signed with other countries as one of the Millennium Development Goals by 2015.

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