Original Article

Retained Placenta: Still a cause of maternal morbidity and mortality in a Nigerian Semi- urban Population

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Abstract

Background: Retained placenta is associated with morbidity and mortality when left untreated. This study was done to determine the occurrence of retained placenta in our setting as well as to ascertain the possible risk factors, morbidities and mortality.

Method of study: This was a retrospective review of all cases of retained placenta over a three year period (March 2005 to March 2007). There were 3542 deliveries, and of which 64 cases were of retained placenta.

Results: The incidence of retained placenta was 1.8% of all deliveries with a higher incidence in unbooked patients and a case fatality of 3.12%.The commonest complication was postpartum haemorrhage in 51(79.68%) of cases with blood transfusion rate of 47%.

Conclusion: Complications associated with retained placenta could be reduced by adequate utilisation of health care facilities manned by skilled attendants; availability of blood transfusion services as well as effective and safe anaesthesia.

Keywords: Haemorrhage, blood transfusion, anaesthesia

Worldwide, more than half a million women die as a result of pregnancy and childbirth and 99% of these births are occurring in developing countries. About 25% of maternal deaths are due to haemorrhage and up to 10 -15% of these maternal deaths due to haemorrhage are linked to retained placenta especially in rural, semi-urban settings where deliveries are performed by unskilled birth attendants [1, 2]. When retained placenta is left untreated, there is a high risk of maternal death.

This condition is said to affect 0.6 – 3.3% of normal deliveries. Many cases of post-partum haemorrhage are associated with retained placenta[2]. When there is easy access to hospital care and transfusion, mortality from this condition can be very low. Studies in the developed world showed that no deaths occurred from haemorrhage related to simple retained placenta but mortality occurred as a result of placenta inversion, placenta accreta or complications of treatment[2].

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The same cannot be said in developing countries. In a large Northern Nigerian hospital, the mortality was 3% amongst 894 women treated for retained placenta over a three and half year period. The cause of death is usually haemorrhage.[3]

Initial management of retained placenta is expectant. Vaginal examination will establish whether the cervical os is open and if placenta retention is due to adherence. If the placenta has separated and is retained because of a closed os, then profound analgesia should allow manual dilatation of the cervix and access to the uterine cavity. Non-surgical strategies may be useful in rural areas where access to the skills required for manual removal of placental may be limited.

The study was done to evaluate the incidence of retained placenta as well as its possible aetiological risk and morbidities and mortality.

Materials and Methods

The Irrua Specialist Teaching hospital (ISTH) is a Nigerian semi-urban specialist health care institution with referrals of patients from maternity homes, primary and secondary health care facilities. The data for this study

were collected retrospectively on all cases of retained placentae who presented at the labour ward of ISTH for a period of three years, spanning from March 2005 to March 2007. Relevant data were obtained from medical records. These data included maternal age, parity, booking status, place of delivery, risk factors for retained placenta, presenting features, mode of presentation and associated morbidities and mortality.

These data were then fed into the computer and analyzed using Microsoft excel statistical package and represented by simple percentages and descriptive statistics.

Results:

There were a total of 3542 deliveries between March 2005 and March 2007. Booked patients represented 2931(82.8%) of cases while unbooked patients were 611 (17.2%) of the cases. There were 64 cases of retained placenta giving an overall incidence of 1.8%. The incidence in relation to booking status: for the booked incidence is 1.05% and 5.4% for the unbooked.

Table 1: Sociodemographic characteristics of the patients with retained placenta

Age (yrs)	Number	Percentage (%)
≤20	0	0.00
21-25	9	14.06
26-30	24	37.50
31-35	24	37.50
>35	7	10.9
Parity		
0	9	14.06
1	7	10.9
2	0	0.00
3	8	12.5
4	24	37.5
≥5	16	25.0
Occupation		
Farmers	7	10.9
Civil servants	8	12.5
Traders	24	37.5
Students	8	12.5
House wives	16	25.0
Unstated	1	3.12

Table 2; Clinical features at presentation at the hospital emergency room

clinical presentation	Booked n (%)	Unbooked n (%)	Total n (%)
Active bleeding	11(17.20)	13 (20.30)	24 (37.50)
Cord snapped	14 21.88)	2 (3.12)	16 (25.00)
Shock	1 (1.56)	7 (10.94)	8 (12.50)
Tachycardia	10(15.62)	14(21.88)	24(37.50)
Bulky atonic uterus	31(48.44)	33(51.56)	64(100.00)
Prophylactic oxytocics not given during 3rd stage of labour	0 (0.00)	16 (25.00)	16 (25.00)
Spontaneous labour	36(56.25)	12(18.75)	48(75.00)
Induced labour	12(18.76)	2(3.12)	14(21.88)
Previous caesarean section	14(21.88)	2(3.12)	16(25.00)
History of induced abortion	29(45.32)	27(42.18)	56(87.50)
History of spontaneous abortion	2(3.12)	0(0.00)	2(3.12)
IUFD at term/ preterm	4(6.24)	0(0.00)	4(6.24)
Gestational age at delivery			
Preterm	4(6.25)	4(6.25)	8(12.50)
Term	27(42.18)	29(45.32)	56(87.50)
Duration of labour ≤12hours	31(48.43)	33(51.56)	64(100)
Duration of PPROM**			
≥12hours	31(48.43)	33(51.56)	64(100)
Previous retained placenta	1(1.56)	0(.00)	1(1.56)

** PPROM – preterm premature rupture of membranes.

The age range was between 17 and 36years old. Majority of the cases of retained placenta occurred between the age range of 21 to 35years, in 57 (89%).

The parity was between 0-9. Zero parity were 9(14.06) of cases: para1 accounted for 7 patients (10.9%),para 3, 8 patients(12.5%): while para 4 and 5 had 24 patients(37.5%) and 16(25%) respectively. Table 1 illustrates the sociodemographic characteristics of the patient.

Table2 shows the clinical features at presentation. More than half the patients had duration of labour greater than 12hours following a term pregnancy. Previous uterine surgery was an important clinical feature in most cases especially induced abortion by dilatation and curettage. Prophylactic oxytocics were not given in unbooked patients.

The place of delivery and skilled attendant at delivery were shown in table 3. The unbooked delivered more at maternity homes, home, PHC and attended by less skilled attendants.

Table 4, illustrates the various mode of management of retained placenta. MROP with anaesthesia was done in 48(75.00%) of cases and the placenta removed as a whole or in fragments. Prophylactic antibiotics and oxytocin administration was done in majority of cases.

Table 4; Mode of management

Procedures	No (%)
MROP without anaesthesia	16 (25.0)
State of placenta after removal	
Whole	16 (25.0)
Piecemeal	0 (0.0)
MROP with anaesthesia	48 (75.0)
State of placenta after removal	
Whole	27 (42.2)
Piece meal	23 (35.8)
Prophylactic antibiotic therapy	61 (95.3)
Hysterectomy	1 (1.56)
Oxytocin administration	62 95.00)
Blood transfusion	47(73.40)

The complications and haemorrhages was severe enough to result in shock in 16(25.00%) of cases. Mortality occurred in two cases. (Table5).

Table 5: Complications

Complications	Booked N (%)	Unbooked N (%)	Total n=64(%)
Primary PPH	16(25.00)	35(54.68)	51(79.68)
Anaemia on admission (pcv%)			
6-19	0(0.00)	10(15.62)	10(15.62)
20-25	3(4.68)	18(28.12)	21(32.81)
26-29	15(23.43)	5(7.81)	20(31.25)
30-38	10(15.62)	3(4.68)	13(20.31)
Hypovolaemic shock	5(7.81)	11(17.18)	16(25.00)
Endometritis	2(3.12%)	1(1.56)	3(4.68)
Genital tract lacerations	2(3.12%)	7(10.93)	9(14.06)
Delayed haemorrhages(Reexploration)	2(3.12%)	1(1.56)	3(4.68)
Prolonged hospital stay≥5days	10(15.62%)	46(71.87)	56(87.50)
Maternal mortality	0(0.00)	2(3.12)	2(3.12)

Discussion

The incidence of retained placenta in this study was 1.8% and it is within the reported incidence of 0.5-3.0% by authors in Nigeria and elsewhere[1, 4,5,6,7]. 51% of the patients were not booked for antenatal care. This was lower than studies done by other authors[8,9] but higher than that reported by Soltan and Khashoggi[10] .This may reflect different sociocultural and educational backgrounds of the patients. In most sub Saharan countries, antenatal care utilization is still low and unbooked patients also are more likely to be

supervised by unskilled attendants or delivered in inadequately staffed health care facilities which may lead to delay or poor management of 3rd stage of labour.[5] This may contribute to the quoted higher incidence of retained placenta among the unbooked patients in this study. A Nigerian study has also demonstrated that non booking for antenatal care can constitute an approximate 23fold increase in the risk of retained placenta.[5]

Although this study is not a case-control study but the incidence of retained placenta appears to occur in patients of higher parity and previous uterine surgery. This is consistent with studies done elsewhere. [5-10] It has been suggested that the factors which caused injuries that led to deficient or damaged endometrium, predispose the implanted ovum's chorionic villi to penetrate into the uterine muscles. This penetration of the endometrium and the uterine muscles predispose to placenta retention.

Adebisi et al investigated the risk of retained placenta using a multi variate approach and found association of previous retained placenta, previous injury to the uterus, preterm delivery, induced labour and multiparity with retained placenta.[6]

In this study, the finding of previous history of retained placenta was 1(1.56%). It should be noted that with a previous episode of retained placenta there is a recurrence rate of 6.25% and it is more with many episodes.

High parity as a risk factor for retained placenta has been demonstrated by different authors from controlled studies[5-10] and so the finding of the high incidence of retained placenta among highly parous women in this study was not surprising. This is coupled with the finding of highly parous women in our environment who are also unbooked. The combined factors may have led to the higher incidence of retained placenta.

Antibiotics were given to all women in this study because manual removal of placenta carried an increased risk of endometritis, caused by a variety of organisms. However, there is no consensus of opinion on whether antibiotic prophylaxis should routinely be advocated.[11]

In this study, the major complication was primary postpartum haemorrhage. 51(79.7%) of the patients had haemorrhage of ≥500ml at presentation and during management of the condition. Retained placenta and manual removal of placenta (MROP) are associated with haemorrhage and was severe enough in this study to warrant blood transfusion in 47(73.4%) of patients while 16 (25.0%) of cases were admitted with haemorrhagic shock. This is consistent with the findings of other studies done by Owolabi et al[5], Onwudiegwu and Makinde[9], Chlabra and Dhorey[12].

The most common treatment for retained placenta in this study was by manual removal of placenta (MROP) under anaesthesia in 41(75.0%) of cases. In the absence of active bleeding, time is usually allowed to lapse before MROP is done. This is because the risk of risk of bleeding is usually low in the first 30minutes postpartum as a further 40% of placenta will spontaneously deliver with the loss of about 300ml of blood.[13] This may also eliminate the risk of infection and genital tract laceration if the placenta is delivered by MROP besides the risk of anaesthesia.

Placentas were removed as a whole piece in 24 (37.5%). Often in our centre, when partial removal is achieved manually, curettage is used to remove the remaining placental tissues as much as possible so long as haemorrhage is controlled and uterus is well contracted. The use of umbilical vein injection of normal saline with or without oxytocics was not used in the management of patients despite the beneficial effects documented in the Cochrane library because of no experience with the technique[13].

With the degree of haemorrhage and the associated high blood transfusion rate in this study with other complications seen, the umbilical vein injection could be useful to obviate these complications in rural settings where general infrastructures such as operation theatre facilities and anaesthesiologists are not available. Two cases of maternal mortalities were

recorded in this study resulting in a case fatality of more than 3%.They were unbooked patients who presented in a state of irreversible shock following massive haemorrhage. This occurred following unsupervised delivery at home without prophylactic oxytocics administered. One of them was a grand multipara with low socioeconomic status, but lived not far from our facility. This illustrates the tragedy of the unbooked patients.

In conclusion, retained placenta will continue to occur but the morbidities and even mortality could be reduced to the barest minimum. The findings in this study clearly showed that antenatal utilization. Delivery in health care facilities with skilled attendants, availability of blood transfusion services, effective and safe anaesthesia could reduce the morbidities associated with retained placenta.

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