ORIGINAL ARTICLE

Retained Placenta Aspect of Clinical Management in a Tertiary Health Institution in Nigeria

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Abstract

Background: *Retained placenta is a significant cause of postpartum haemorrhage, maternal morbidity and occasionally mortality. This study assessed the clinical presentation, management and outcomes of retained placenta at the Ebonyi State University teaching Hospital.*

Method: *Analysis of records relating to retained placenta managed in the hospital over a three year period (August 2003 to July 20060.*

Results: *The incidence of retained placenta was 0.22% (1 in 456 vaginal deliveries). Eleven (32.4%) patients were admitted with retained placenta following home delivery. Two (5.6%) delivery in a peripheral hospital, 6(17.7%) delivered in a Health center and 2(5.9%) delivered in a maternity home. Preterm deliveries accounted for 17.7% of the cases. Eighteen parturient were admitted in shock. One patient had hysterectomy for adherent placenta.*

CONCLUSION: *Improved peripatum services, education on the dangers of unsupervised home deliveries, women empowernment and prompt referral for emergency obstetrics care will reduce the associated mortality and morbidity.*

Key Words:Anaemia, Significant, Retained placenta
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INTRODUCTION

Retained Placenta complicates 0.5% to 1% of third stage labour[1] and is associated with maternal morbidity and mortality when complicated by haemorrhage and sepsis[2]. Prompt access to emergency obstetrics care and blood transfusion reduce case fatality rates[3].

Studies have shown significant associations of retained placenta with multiparity, induced labour, small placenta, high blood loss, high pregnancy number, previous uterine injury and preterm labour[4]. Other predisposing factors include poorly managed third stage of labour resulting in the clamping down of the cervix on a placanta that has already separated. This may result from a delay in the initiation of controlled cord traction in the patient whose third stage has been actively managed[5].

The management of retained placenta includes emptying of the bladder and removal of placenta by Brandt-Andrews method. Failure of this entails manual removal of placenta in the theatre under general anaesthesia and Oxytocic. Blood transfusion may be required and hysterectomy reserved for the morbidly adherent placenta[6]. Some workers have reported successes with the infusion of 50 IU of Oxytocin in 10 ml of normal saline through the umbilical cord by the Papingas method[3].

The department of Obstetrics and Gynaecology of Ebonyi State University Teaching Hospital Abakaliki is a very young center without baseline indices for basic obstetric conditions and their management including placental retention. This study was aimed at correcting this deficiency.

MATERIALS AND METHOD

The study was carried out in the department of Obstetrics and Gynaecology Ebonyi State University Teaching Hospital Abakaliki. Abakaliki is the capital city of Ebonyi State which has an estimated population of 2.1 million. The population is mainly agrarian with a high illiteracy and poverty levels. The Ebonyi State University Teaching Hospital Abakaliki (EBSUTH) is one of the two tertiary health institutions in the state receiving referral cases from the various hospital and clinics in the state and neighbouring states of Benue States, Enugu state, Abia state, and Cross river state.
In the unit, the third stage of labour is actively managed using intravenous Oxytocin given at the delivery of the anterior shoulder. The placenta is then delivered by controlled cord traction. A retained placenta, which cannot be removed in this manner, is manually removed in the theatre.

STUDY DESIGN

The study was a retrospective analysis of the records of women with retained placenta managed over a 3 year period (August 2003 to July 2006). After obtaining permission from the institutional review board of the hospital, the case notes were retrieved from the health records department and relevant information were extracted such information collected included age, parity, gestational at delivery, mode of delivery, management procedure, clinical history, investigation (especially Haemoglobin estimation on discharge) and

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treatment options employed. Others include complication delivery-admission, duration of stay in the hospital, place of delivery and management outcomes. Only vaginal deliveries were included in the study.

STATISTICAL ANALYSIS

Data was analyzed using Epi info 2005 soft ware version 3.3.2 (CDC. Atlanta USA). The results were presented using simple frequency tables.

RESULTS

During the study period, 42 cases of retained placenta were managed at the center. Thirty case notes (81%) were retrieved and analyzed. Twelve (35.2%) cases of the retained placenta followed home delivery, two (5.9%) from a peripheral hospital, seven (20.6%) from a health center and 2 (5.9%) from a maternity home. Eleven (32.9 %) cases were consequent upon deliveries conducted at the hospital giving an institutional incidence of 0.22%.

Table I showed the socio-demographic characteristics of the patients. The age ranged from 17-40 years with a mean of 28.5 years. Two (5.9%) of the patients were teenagers. The parity ranged from primipara to para 7 and most were multipara (58.8%). Of these, 23.5% were grand multiparous. Six (17.7%) women delivered preterm.

Table I. Socio-Demographic characteristics of the patients.

Age	n	Percentage (%)
<19	2	5.9%
20-29	18	52.9%
30-39	13	38.2%
>40	1	2.9%
Total	34	100%
Parity	n	%
0	14	41.2
1-4	12	35.3
>5	8	23.5
Total	34	100
Gestational Age	n	%
<37 weeks	6	17.7
37-40	26	76.5
>40 weeks	**2**	**5.9**
Total	34	100%

Table II Showed the delivery admission intervals. 20 women (58.8%) attended within 6 hours of delivery. One presented after 24 hours for those women who were delivered outside the hospital, the minimum delivery-admission interval was 2 hours (1 case only) and maximum was 24 hours (1 case only) 2.9%.

Table II. Delivery admission interval

Delivery admission (Hours)	Number	Percentage (%)
<6	20*	58.8
7-12	9	26.5
13-18	3	8.8
19-24	1	2.9
>24	1	2.9
Grand Total	34	100

*Including the 11 hospital deliveries.

Table III showed the condition of the parturient on admission. Of the patients admitted from outside the unit with retained placenta, 18 (78.3%) came in a state of shock. 19 (82.6%) cases had severe anaemia (Haemoglobin < 7 gm %), 6 (26.1%) Moderate (< 9 gm %). 8 (34.9%) were mildly anaemic (-11gm %) and only 1 (4.3%) case had haemoglobin of 11gm% and above.

Table III. Condition at admission

Haemoglobin Gm %	Shock present		Shock absent		Grand total	
	n	%	N	%	n	%
<6.9	16	47.2	3	8.8	19	55.9
7-8.9	1	2.9	5	14.7	6	17.6
9-10.9	1	3.0	7	20.6	8	23.5
>11	-	-	1	2.9	1	2.9
Total/average	18	53.0	16	47.0	34	100

Table IV showed possible risk factors for retained placenta. Three (8.8%) women had had previous uterine surgeries. One had a dilatation and curettage (D&C) and another had a bicornuate uterus. Five (14.7%) cases had premature rupture of membrane.

Table IV. Risk factors

Risk factor	N	%
Previous surgery	3	8.8
Uterine Abnormalities	1	2.9
Premature rupture of memb.	4	14.7
History of retained placenta		
Prematurity	1	2.9
Multiparity	6	17.7
	20	58.8

Table V showed the management modalities and their outcomes. In 27 cases overall, manual removal of the placentae under general anaesthesia were carried out. Four (17.7%) cases were delivered under intravenous Oxytocin infusion. One woman had hysterectomy because of morbid adherence and severe haemorrhage (2.9%). Two cases were delivered using 40 I.U Oxytocin in 20ml Dextrose water by infusion via the umbilical vein.

Table V. Management modality and outcome

Management modality	Outcome				Total	
	Successful		Unsuccessful			
	n	%	n	%	n	%
Manual removal of placenta	27	96.4	1	3.6	28	90.3
Umbilical cord oxytocin infusion	2	66.6	1	33.4	3	9.7
Total	29	93.5	2	6.5	31	100

The complication seen included three cases of puerperal sepsis. All were home deliveries that presented to the hospital after more than 6 hours following delivery of the baby; they had manual removal of placenta in the theatre. Two cases stayed on admission for more than 20 days in the hospital, the rest were discharged in good condition with an average hospital stay of 4 days. No maternal death was recorded.

DISCUSSION

It is believed that 90% of term placentas are delivered spontaneously within 15 minutes of delivery and only 2.2% remain undelivered at 30 minutes[7]. However with the advent of active management of the third stage of labour and judicious use of Oxytocics, the definition and rate of retained placenta require modification. Placenta is said to be retained in this case after all maneuvers to deliver the placenta failed to do so irrespective of the duration[8]. It is a significant contributor to maternal morbidity and mortality.

The incidence of retained placenta is reported be 0.23% - 3.3% of all deliveries.[4], [8, 9, 10] The incidence of retained placenta among women delivered in our unit was 0.22% and this compared favourably with the o.23% reported by Adelusi from Lagos[4]. The low incidence may be due to the third stage management strategies adopted in the unit, especially in high risk cases with a preventive and individualized approach, prophylactic oxytocin, controlled cord traction, and early cord clamping. The overall incidence of retained placenta in this study was 0.84%, which much higher than the figure among those delivered in the hospital. It may imply that delivery in a well equipped and staffed hospital where active management of third stage of labour (AMTSL) is practiced would reduce the incidence of retained placenta.

Poor management of the third stage of labour has contributed significantly to the incidence of retained placenta in low socio-economic setting like ours. Poorly managed third stage of labour results in the clamping down of the initiation of controlled cord traction in the patient whose third stage of labour has actively managed.[5, 11] In this study most of the cases were unbooked. The use of prophylactic Oxytocics has marked effect on the length of the third stage. In the Cochrane review, the mean length of the third stage in those who had physiological management was 15.5 minutes compared with 8.8 minutes in those who had active management[12]. This also translates into a reduction in the number of placenta still in situ at 20 and 40 minutes when the number who actually needs manual removal is compared. Oxytocin use for the therapy of retained placenta seems beneficial only where retention is attributable to delayed separation due to inadequate contractility. In this study about 17.7% of cases were delivered after Oxytocin infusion alone was instituted. It has been documented that the use of intravenous infusion of Oxytocin has never been subjected to a randomized trial but has been suggested that it may prevent haemorrhage during transfer or preparation for theatre[13]. Oxytocin increases the overall tone of the myometrium as well as stimulating strong phasic contractions. Other Oxytocic agents are Ergometrine and Misoprostol however, the beneficial effects on rate of retained placenta have not been noted, but are useful when used for controlling haemorrhage[13].

The risk factors for retained placenta include age above 35 years, grand multiparity, a previous history of retained placenta, preterm delivery, previous uterine surgery especially Caesarean section [4,14]. In this study, 58.8% of the patients were multiparous of which 23.5 % were Grandmultiparous. There are increased abnormalities of placental implantation in the grand multipara[15]. Fibrous tissue reduces the contractile power of the uterus and thereafter placental retention11. 17.7% women had preterm deliveries, 14.7% with premature rupture of membrane. 2.9% had retained placenta in the past, only 3 (8.8%) had had surgery in the past. These figures are quite low compared with other reports[8]. This may be attributed to the poor history taking in which predisposing factors are not sought for and so the need for comprehensive history taking by caregivers especially in teaching institutions to ease research is advocated. Inadequate record keeping made it impossible to get some of the case notes of patients and poor documentation in the case notes were limitations in this study.

Retained placenta had remained a significant cause of post partum morbidity and even maternal mortality. Of the cases admitted from outside our unit 78.3% were in a state of shock. This rate supersedes that reported by Mathur in 1984 [16], where only 45% were admitted with shock. The poor referral system and transportation

difficulties encountered in our setting may partly account for this. Meanwhile, reproductive health decisions in this locality often reside with the man, contributing to unnecessary delays and worsening of the clinical state of the patient. The risk of major haemorrhage rises after 30 minutes of placental retention[3].

For retained placentae, injection of 50 I.U Oxytocin (in 30 ml saline down the umbilical cord by the Papingas method [17] is a worth while first-line option[3]. Of the three patients that had oxytocin delivered directly to the myometrium via the umbilical vein, two (66.6 %) were successfully delivered within 15 minutes. The one that failed was eventually delivered piece meal showing a morbid adherence, which may have accounted for the failure. Results from trials of this treatment have been mixed, however a recent Cochrane review[18], concluded that the use of umbilical vein institution of oxytocin is effective in the management of retained placenta. If the umbilical vein injection of oxytocin is unsuccessful after 30 min then manual removal should be carried out.

CONCLUSION

Improvement in peripartum services, mass education on the dangers of unsupervised home deliveries, women empowerment and also quick intervention will reduce the mortality and morbidity associated with retained placenta. It is also important to strength the referral system in the country.

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