An Appraisal of Retained Placenta As A Complication of Third Stage of Labour At Alex Ekwueme Federal University Teaching Hospital Abakaliki Over A Four Year Period

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Abstract:

BACKGROUND: Retained placenta is a potentially life threatening complication and the second major indication of blood transfusion in third stage of labour. It affects 1 – 3% of all deliveries and 0.1 – 3.3% of vaginal deliveries. This study was aimed to determine the incidence, risk factors and treatment modalities for patients who were managed for retained placenta at Alex Ekwueme Federal University Teaching Hospital Abakaliki, Ebonyi State

METHODOLOGY: This was a retrospective review of records from January 2012 to December 2015. The case files of all women who had retained placenta were retrieved and reviewed. Data were retrieved, entered into a study proforma, reviewed and analyzed. The results were expressed using descriptive statistics.

RESULTS: There were 46 cases of retained placenta (0.5%) out of 8651 deliveries. The 42 retrieved and reviewed cases presented after 60minutes of the delivery of the baby with a mean duration of 6.74hours. It was common among parturient aged 20–30years (52.4%), para 2-4 (54.8%), unbooked (88.1%), rural dwellers (92.9%), farmers (33.3%), those with secondary education (38.1%) and majority of the deliveries were term (90.5%). Risk factors identified were unbooked status (24.5%), multiparity (22.5%) and unskilled attendant at delivery (15.2%). Manual removal of the placenta was the commonest method of treatment (59.5%). At presentation 57.1% delivered at home/TBA and 23.8% were actively bleeding, 73.8% were normotensive while 11.9% were in shock.

CONCLUSION: The incidence of retained placenta was low but most presented late with morbidities were present.

Keywords: **Manual removal of placenta, Post-partum haemorrhage, Retained placenta, third stage labour.**

I. INTRODUCTION

Retained placenta is defined as the inability to deliver the placenta when methods designed to deliver if fails[1,2]. In most English speaking countries, the time bound is 30minutes, while in some countries it is 60minutes.[1]It is a potential life threatening condition and a common cause of maternal mortality from post-partum haemorrge; worse still in the developing countries which contributes 90% to the worldwide figure, 25% of these being due to haemorrage.[3, 4] Lim et al[5] in a systemic review in 2014 was able to highlight that the incidence is increasing. Retained placenta affects 1-3% of all deliveries [1] and 0.1 – 3.3% of vaginal deliveries.[2,3,6,7] Local studies recorded an incidence of 0.59% in port Harcourt in the south region [5] and 1.9% in the south west Nigeria [8] and 0.22% in Abakaliki south east Nigeria[9].

Some risk factors implicated in the pathogenesis includes maternal age greater than 35yeras, multiparity, history of previous retained placenta, history of previous uterine surgeries, preterm deliveries, uterine abnormalities and induced labour.[5,8,10] The causes include placenta entrapment, uterine atony, uterine abnormalities, constricting cervical ring, full bladder[11,12] and ergometrine use before delivery of placenta.[4]Also placenta adherence.[13,14, 26,28,30]Treatment of retained placenta can either be medical or surgical.[4]Medical treatment involves oxytocin infusion, injection of oxytocin into the placenta bed through the umbilical vein after mixing with normal saline, sequential intravenous oxytocin and nitroglycerine. Surgical treatment includes manual removal of placenta, piece meal removal with manual vacuum aspirator and/or a metal curate blinded, segmental resection and hysterectomy.[11,12,15-17,23,30] Currently, hysteroscopic morcellation has been introduced to counter the blind procedure.[17]

The timing of intervention is a balance between the risk of primary postpartum haemorrhage and the likelihood of spontaneous delivery with the knowledge from caesarean section studies that the manual removal itself causes haemorrage.[18]Blood loss associated with retained placenta can be acute life threating and may require emergency interventions like administration of uterotonics, correction of

hypovolemia, manual removal of placenta and blood transfusion.[1]With retained placenta complications may following; these are post-partum haemorrge, shock, puerperal sepsis, sub-involution, hysterectomy and death if left untreated. [2,6,11,12,22]A retrospective study done in Tanzania showed that retained placenta contributed 13% to maternal death, blood transfusion was required in 10% of retained placenta group compared to 0.5% among the control group.[19] Lim et al [5] stated that the incidence of post-partum haemorrhage wasincreasing.

The last study done here in Abakaliki Ebonyi State Nigeria was published in 2008[9]. With the establishment of the Federal Teaching Hospital in this place in 2011, we felt it was necessary to revisit the topic of retained placenta in order to document the effect of improved obstetrics care on this common cause of obstetric emergency worldwide and in this environment.

II. MATERIALS AND METHOD

This study was carried out in the department of obstetrics and gynaecology of Alex Ekwueme Federal University Teaching Hospital Abakaliki, Ebonyi State, Nigeria. The hospital is a product of the merger of two hospitals: Ebonyi state teaching hospital and federal medical centre Abakaliki. It is the only tertiary hospital in the state. It draws its patients primarily from Ebonyi state and neighbouring states Enugu, Benue, Abia and Cross Rivers. Majority of the patients are drawn from referrals from maternity homes, mission hospitals, state general hospital and private clinics. A good number of patients come as self-referrals.

This study is a retrospective descriptive study of retained placenta at the obstetrics and gynaecology department of the hospital. The case files of all women managed for retained placenta after 28weeks of pregnancy between January 2012 to December 2015 were retrieved and reviewed. The files were retrieved from the medical records department and accident and emergency department. To ensure that all case were included, the delivery register, labour ward and operating theatre record were cross checked. Data was extracted and entered into the study proforma focusing on the socio-demographic and obstetricscharacteristics including age, parity, occupation, educational level, booking status, gestational age at delivery, maternal outcome, mode of presentation, number/need for blood transfusion, place of delivery and duration of hospital stay.

Data was analyzed using SPSS version 20.0 software. The results were expressed as frequency tables, percentages, mean and standard deviation. P-value of ≥0.05 was considered statistically significant.

III. RESULTS

There were 46 cases of retained placenta (0.5%) out of 8651 deliveries. The 42 retrieved and reviewed cases presented after 60minutes of the delivery of the baby with a mean duration of 6.74hours. Table I showed that it were common among parturient aged 20–30years (52.4%), para 2-4 (54.8%), unbooked (88.1%), rural dwellers (92.9%), farmers (33.3%), those with secondary education (38.1%) and majority of the deliveries were term (90.5%). Table II showed that at presentation 57.1% delivered at home/TBA and 23.8% were actively bleeding, 73.8% were normotensive while 11.9% were in shock. Table III noted unbooked status (24.5%), multiparity (22.5%) and unskilled attendant at delivery (15.2%)as major risk factors. Table IV recorded manual removal of the placenta as the commonest method of treatment (59.5%). Table V noted that 92.9% were alive and well while 7.1% had some morbidities at presentation. More so majority were discharged on day 3 (45.2%) while few (16.7%) were discharged after 5days.

TABLE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS

Variable	Frequency	percentage
Age		
<20	6	14.3
20 – 30	22	52.4
>30 – 34	8	19.0
≥35	6	14.3
Parity		
1	8	19.0
2-4	23	54.8
≥5	11	26.2
Educational Level		
No formal education	9	21.4
Primary	12	28.6
Secondary	16	38.1
Tertiary	5	11.9
Occupation		
House wife	12	28.6
Trader	8	19.0
Farmer	14	33.3
Seamstress	2	4.8
Teachers	3	7.1
Hair dresser	3	7.1
Residence		
Rural	39	92.9
Urban	3	7.1
Gestational Age		
Pre-term	4	9.5
Term	38	90.5
Booking Status		
Booked	5	11.9
Unbooked	37	88.1

TABLE 2: PRESENTATIONS

Variable	Frequency	percentage
Place of delivery		
Home/TBA	24	57.1
Maternity/PHC	13	31.0
Hospital (others)	3	7.1
FETHA	2	4.8
Attendee at delivery		
Unskilled	23	54.8
Doctor	5	11.9
Nurse midwife	13	31.0
Self	1	2.4
Haemorrhage at presentation		
Yes	10	23.8
No	32	76.2
Hemodynamic status at presentation		
Normotensive	31	73.8
Hypotensive	5	11.9
Shock	5	11.9
Hypertensive	1	2.4

TABLE 3: IDENTIFIED RISK FACTORS

Variable	Frequency	percentage
Unbooked	37	24.5
Multiparity	34	22.5
Unskilled	23	15.2
Home delivery	17	11.3
PHC/Maternity	13	8.6
Ergot use	6	4
Abortion	5	3.3
Previous c/s	5	3.3
Preterm labour	4	2.5
Induction of labour	2	1.3
> 35 years	2	1.3
Previous history of retained placenta	1	0.7
Preeclampsia	1	0.7
Self-delivery	1	0.7

TABLE 4: TREATMENT MODALITIES

Variable	Frequency	percentage
Oxytocin infusion	1	2.4
Manual removal of placenta	25	59.5
Curettage	8	19.0
Repeat controlled cord traction	19.0	8
Blood transfusion		
Yes	14	33.3
No	28	66.7
Oxygen use		
Yes	9	21.4
No	33	78.6

Table 5: MATERNAL OUTCOME

Variable	Frequency	percentage
Alive and well	39	92.9
Alive with morbidity	3	7.1
Duration of hospital stay		
2 days	6	14.3
3 days	19	45.2
4 days	2	4.8
5 days	8	19.0
> 5 days	7	16.7

IV. DISCUSSION

The result of the study showed that all the patients were diagnosed of retained placenta after 60minutes of the delivery of the baby with a mean duration of 6.74 hours. This is in line with the definitions of retained placenta by Vijayalakshmi et al[11] that defined it as when the placenta has not been delivered within 30minutes of birth, when the third stage of labour is actively managed or one hour when physiologically managed without signs of post-partumhaemorrhage or maternal collapse. This may be that most cases were unbooked (88.1%) and came from rural arrears (92.9%). The study noted a prevalence rate of 0.5% for retained placenta. This is higher than 0.22% noted by Agwu et al at EBSUTH Abakaliki in 2008[9]. This may be because of increased awareness and strengthening of the referrer system at Ebonyi state since the merger that produced FETHA in 2011 but figure is below the world incidence rate of 1 – 2% of all deliveries[1]. Study done at University of Port Harcourt Teaching Hospital however recorded similar incidence of 0.59%.[5]

The common risk factors for retained placenta were unbooked status (24.5%), multiparity (22.5%), unskilled birth attendant (15.2%), home delivery (11.3%), delivery at a primary health care/ maternity (8.6%), ergometrine use (4%), previous caesarean section (3.3%), abortion (3.3%), preterm labour (2.6%), age > 35 years (1.3%), induced labour (1.3%), pre-eclampsia (0.67%), self-delivery (0.6%) and previous history of retained placenta (0.6%). This is in line with study by Combs et al[10]that identified them as risk factors for retained placenta. It is also in line with other documented risk factors for retained[2,5,10, 11, 21].Most of patients were of high parity P_{2-3}(54.8%) and $\geq P_5$(26.2%) portraying multiparity as a strong risk factor. Highest was seen among those aged 20 – 30

22(52.4%), this may be as a result of this age being the peak reproductive age. They were mostly farmers (33.3%), house wives (28.6%) and traders (19.0%) showing most common occupations among rural dweller in Ebonyi State. They were mostly literate as only 21.4% had no formal education while 28.6% had primary education, 38.1% had secondary education and 11.9% had higher education. This may have affected their decision to seek for medical care when the process of delivery gets complicated. Most of the deliveries were term (90.5%). About 57.1% delivered at home/TBA, 31% at a PHC/maternity, 7.1% in other hospitals and 4.8% at FETHA. This is similar to a study by Obajimiet al[18] that noted that retained placenta was seen especially in women of low social class due to pre- existing malnutrition, anaemia, home deliveries and lack of facilities. Unskilled personnel were in attendant in 54.8% of deliveries, Nurse Midwives (31%) and Doctors (11.9%).

Manual removal of the placenta was the commonest method of treatment (59.5%), as was also noted in similar studies.[4,11,12,15-17,22] At presentation 23.8% were actively bleeding, 73.8% were normotensive, 11.9% were hypotensive and 11.9% were in shock. Blood transfusion was used in 33.3% and 21.4% required oxygen administration. This was higher than the study by Tandberg et al[19] which showed that retained placenta contributed 10% to blood transfusion when compared to control group, this difference may be that our study was a retrospective study while theirs was a case control study. Studies have also documented retained placenta as the second major indication of blood transfusion in the third stage of labour [3, 5, 11, 18]. It also showed that 92.9 % had no complications while 7.1% had associated morbidity that increased their stay however, majority (45.2%) were discharged on day 3 of admission. This is similar to hospital study by Akinola et al[1] which noted an association between the duration of the third stage of labour and the incidence of occurrence of maternal morbidity and mortality from retained placenta. There was no record of maternal death.

V. CONCLUSION

Though the incidence of retained placenta was low with most presenting late, morbidities were present. So there is the need for health education and enlightenment of the populace at risk and the need to book for antenatal care and deliver in a health facility with skilled personnel emphasized.

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