

## ORIGINAL ARTICLE

## An Appraisal of Retained Placenta in Sokoto: a five-year review

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## ABSTRACT

**Background:** Retained placenta is one of the major causes of primary and secondary postpartum haemorrhage associated with increased risk of maternal morbidity and mortality.

**Objective:** To determine the incidence, method of treatment and maternal outcome of patients with retained placenta.

**Methodology:** This is a retrospective study covering a period of 5years, January 1<sup>st</sup>, 2007 to December 31<sup>st</sup>, 2011, in Usmanu Danfodiyo University Teaching Hospital (UDUTH), Sokoto.

**Results:** During the 5-year period, there were 144 cases of retained placenta out of 8569 total deliveries, giving an incidence of 1.7%. However, only 118 patients' case records were available for analysis. Majority of the patients 88 (74.6%) were unbooked for antenatal care in UDUTH and 104 (88.1%) patients had home delivery. The identified risk factors included previous history of retained placenta 32 (27.1%) and previous uterine surgery 13 (11.0%). Fifty per cent of the patients were in hypovolaemic shock at presentation. Manual removal of the placenta was the most common mode of treatment 91 (77.1%). There were 7 maternal deaths giving a case fatality rate of 5.9%.

**Conclusion:** Retained placenta is a significant cause of maternal mortality and morbidity due to the associated haemorrhage and other complications related to its removal. Antenatal care, skilled birth attendant at delivery and provision of emergency obstetrics care services will help to reduce the incidence and severity.

**Keywords:** Morbidity, mortality, post-partum haemorrhage, Sokoto

## INTRODUCTION

Retained placenta is a common cause of postpartum haemorrhage<sup>1</sup>, a condition that affects between 0.6 and 3.3% of normal deliveries.<sup>2,3,4</sup> A placenta is retained when methods designed to deliver it fail. With active management of the third stage of labour, no time limit needs to be exceeded before arriving at the diagnosis.<sup>5</sup> However, other authors have quoted a time of 30 minutes because it is within this time that 95% of the placenta would have been

delivered.<sup>6</sup> Also, once the third stage exceeds 30minutes, there is a 10-fold increase in the risk of haemorrhage.<sup>7</sup>

Retained placenta is a significant cause of maternal morbidity and mortality throughout the developing world and has a case fatality of nearly 10% in rural areas.<sup>8</sup> Failure of expulsion of the placenta may be due to atonic uterus, full bladder or mismanagement of the third stage of labour leading to the formation of retraction ring arresting part or

the entire placenta within the uterine cavity.<sup>9</sup> Abnormal implantation of placenta, as in placenta accreta and uterine abnormalities like bicornuate uterus, have also been associated with placental retention.<sup>10</sup> The majority of cases of retained placenta occur due to failure of retro placental myometrium to contract during the third stage of labour.<sup>8</sup> Another cause of retained placenta is its morbid adherence to the myometrium. This is favoured by such factors as previous endometritis, submucous uterine fibroid, placenta praevia, placental malformation (such as extra chorionic placenta) and previous surgical procedures such as endometrial curettage, manual removal of placenta, previous caesarean section, myomectomy or intrauterine adhesiolysis.<sup>11</sup>

Presently, the most common mode of treatment of retained placenta is manual removal under general anaesthesia.<sup>8</sup> Oxytocin infusion is another mode of treatment and preoperatively it minimizes bleeding before the definitive procedure could be carried out and besides, it may facilitate separation of the placenta. Injection of oxytocin as 50IU in 30ml of saline into the umbilical vein has been suggested as alternative treatment in which detachment of placenta usually takes place 10-20 minutes after and can be removed by controlled cord traction.<sup>12</sup> Sequential administration of oxytocin and nitroglycerine seems to be an effective and safe procedure in the management of retained placenta.<sup>13</sup>

The main complications of retained placenta are primary postpartum haemorrhage and genital sepsis, while the complications of manual removal include incomplete removal of the placenta, uterine perforation, uterine inversion and genital sepsis.<sup>7</sup>

This study was carried out to determine the incidence, method of treatment and maternal outcome in patients treated for retained placenta.

#### METHODOLOGY

This is a retrospective study covering a period of 5 years from January 1<sup>st</sup>, 2007 to December

31<sup>st</sup>, 2011. The study population consisted of women who were managed for retained placenta after 28 weeks of gestation during the period of study at Usmanu Danfodiyo University Teaching hospital (UDUTH), Sokoto, Nigeria. Relevant data were retrieved from the case notes of the study subjects, labour ward records and operating theatre register. Only the case records of 118 were retrieved from the Medical Records Department and 26 case records could not be traced. The relevant data from retrieved case notes were collated and analyzed using SPSS version 11.

#### RESULTS

There were 144 cases of retained placenta out of 8,569 total deliveries during the period of study, giving the incidence of retained placenta as 1.7%. Their age, parity, occupation and educational status are shown on *Table 1*.

**Table1.** Socio-demographic characteristics

Variables	Number (%)
N = 118	
<b>Age (years)</b>	
<20	18 (15.3)
20-29	58 (49.2)
30-39	33 (27.9)
40 or more	9 (7.6)
<b>Parity</b>	
0	27(22.9)
1-4	62(52.5)
5 or more	29(24.6)
<b>Occupation</b>	
House wife	106 (89.8)
Trader	6 (5.1)
Farmer	6 (5.1)
<b>Educational status</b>	
No formal education	70 (59.3)
Primary	24 (20.3)
Secondary	8 (6.8)
Quranic	16 (13.6)

The age of the study subjects ranged from 15-45 years. The mean age was 27.55 ± 7.41 years, with 35.5% aged 30 years and above. The mean parity was 3, and 24.6% of them were grand multipara (patients with more than five deliveries). Only 10.2% were in any form of

paid employment, whereas 70% had no formal education. Unbooked patients (those who did not benefit from ante natal care) constituted 74.6% of the subjects, while booked patients (those who benefited from antenatal care) accounted for 25.4%. Majority of patients (85.6%) had unsupervised delivery at home as in *Table 2*.

**Table 2.** Identified risk factors for retained placenta

Variables	Number (%)
	N= 118
Home delivery	101 (85.6)
Previous history of retained placenta	32 (27.1)
Previous uterine surgery	13 (11.0)
Preterm delivery	10 (8.5)
Previous dilatation and curettage	9 (7.6)

*Note that some patient had more than one risk factor*

Previous history of retained placenta was found in 32 (27.1%) patients, while 13 (11.0%) patients had history of uterine surgery and 10 (8.5%) patients had preterm deliveries. Sixty-two (52.5%) patients were in circulatory collapse (shock) at presentation, and at admission 39 (33.0%) had severe anaemia.

**Table 3.** Mode of removal of retained placenta

Variables	Number (%)
	N=118
Manual removal	91(77.1)
Controlled cord traction	10 (8.5)
Oxytocin injection via umbilical vein	5 (4.2)
Hysterectomy	4 (3.4)
Oxytocin infusion	4 (3.4)
Uterine evacuation	4 (3.3)

*Table 3* shows the methods of removal of retained placenta that were employed. Manual removal of placenta was done in 91 (77.1%) patients, controlled cord traction 10 (8.5%), oxytocin injection via umbilical vein catheterization 4 (4.2%) patients and

hysterectomy 4 (4.2%) patients. Of the 91 (77.1%) patients that had manual removal, 40 (44.0%) had it done under sedation while 21 (23.0%) patients had manual removal done under general anaesthesia. All the patients presenting with retained placenta were placed on antibiotics.

**Table 4.** Blood transfusion

Number of units transfused per patient	Number of patients (%)
	N = 118
0	55 (46.6)
1	5 (4.2)
2	18 (15.3)
3	17 (14.4)
4 or more	23 (19.5)

*Table 4* shows the number of units of blood transfused to the patients. Fifty five patients (46.6%) did not receive blood transfusion, 5 (4.2%) patients received 1 unit of blood each while 18 (15.3%) were transfused with 2 units of blood each. Seventeen (14.4%) patients were transfused with 3 units of blood each, while 23 patients were transfused with 4 or more units of blood each. There were 7 maternal deaths giving a case fatality rate of 5.9%.

## DISCUSSION

Postpartum haemorrhage due to retained placenta is a major cause of maternal morbidity and mortality. The incidence of retained placenta in this study was 1.7%. This was similar to findings in the previous reports where it ranged between 0.6 and 3.3%.<sup>2,3,4,14,15,16,17</sup> The mean age of presentation was 27.55± 7.41 with majority of the patients within 20 to 29years range. Only 10% of the patients were employed which was far lower than 90% reported in South-western Nigeria.<sup>15</sup> Unbooked patients constituted majority of the cases, which corroborates reports from Ibadan and Ile Ife, South-western Nigeria.<sup>14,15</sup>

Delivery by unskilled personnel is more prone to complications of third stage of labour, leading to increased incidence of

retained placenta in the patients who were not booked for antenatal care. Non-booking for antenatal care apparently led approximately to 25-fold increase in incidence of retained placenta in this study. The significant number of unbooked cases in this environment is attributed to non-utilization of health care services probably because of poverty and ignorance.

Predisposing factors to retained placenta observed in this study included home delivery, previous history of retained placenta, previous uterine surgery, preterm delivery and previous dilatation and curettage which had also been documented by previous authors.<sup>14,15,16</sup> The study also showed that 52.5% patients were in a state of shock at presentation. This figure was higher than the 42% at Ile-Ife, Western Nigeria.<sup>18</sup> This may be due to the fact that majority of our patients present late compared to those at Ile-Ife.

Anaemia was observed at admission in most of the patients, correlating with the report from Ibadan, and other places like that of by Onwuidiegwu and Makinde.<sup>14,18</sup> Probably, because most of the patients treated by these other authors presented earlier in their settings, they had less blood loss compared to those in our study.

Fifty-three per cent of the patients were transfused which was higher than 38.8% reported in Ibadan.<sup>14</sup> Twenty-three patients were transfused with 4 or more units of blood. However, this figure was lower than what was reported from Ile-Ife.<sup>18</sup> The attempt at blood replacement was inadequate as 78.3% of the patients still remained anaemic at discharge. This finding was, however, higher than 53% reported in similar study in South-western Nigeria.<sup>18</sup> This difference may be attributed to the higher degree of blood loss in our study and also, the financial constraints due to poverty since almost all the patients in this study were not gainfully employed.

Retained placenta was treated with manual removal in 77.1% of the cases during the study period, which was less than 90% in Ile-Ife.<sup>18</sup> This wide difference is due to late presentation and poor haemodynamic status at presentation in our study which obviated the need for manual removal and informed the choice of other modalities of removal. Majority of patients in this study as in the study in Ile-Ife had manual removal of placenta done under sedation with diazepam and pethidine. This led to a reduction in the cost of treatment when compared to the use of general anaesthesia, which is very important in our environment where the vast majority of them live below the poverty line.

A case fatality rate of 5.9% in this study was much higher than 1% reported in Ile-Ife, South-western Nigeria.<sup>18</sup> This fatality rate may be due to severe blood loss, late presentation and failure to attend antenatal care, which was relatively commoner in our study subjects.

#### CONCLUSION

Retained placenta is a significant cause of maternal mortality and morbidity due to the associated haemorrhage, and other complications related to its removal. Optimal antenatal care, skilled birth attendant during delivery and provision of emergency obstetric care services will help to reduce the incidence and severity of retained placenta.

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