Risk Factors and Outcome of Pregnancies with Placenta Praevia in a Nigerian Teaching Hospital: A 5-year Review.

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ABSTRACT

Background: *Pregnancies with placenta praevia are high risk pregnancies. Placenta praevia is a major contributor to maternal and perinatal morbidity and mortality. Therefore, periodic review is necessary to improve on the outcome of pregnancies with placenta praevia.*

Objectives: *To determine the incidence, risk factors, fetal and maternal outcomes of pregnancies with placenta praevia in Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi, Nigeria.*

Patients and Methods: *This was a retrospective study and the case records of all the patients with placenta praevia that delivered at the Nnamdi Azikiwe University Teaching Hospital, Nnewi, between 1st September 2008 and 31st August 2013 were retrieved from the medical records department and studied. The data was analyzed using the SPSS version 16.0 software.*

Results: *During the period under review, there were a total of 5465 deliveries, 98 of which had placenta praevia. This gave an incidence of 1.8%. The mean age and parity of the patients were 30.2 ± 5.8years and 1.8 ± 1.9, respectively. The commonest mode of presentation was vaginal bleeding in 63 (88.7%) patients. The commonest identified risk factor was termination of pregnancy by dilatation and curettage, 19(26.8%). Type II placenta praevia was the commonest type found in 34 (47.9%) patients. Majority of the patients, 70(98.6%), delivered by caesarean section. Therefore, 3.3% of all caesarean sections during the period of the study were due to placenta praevia. Only 1(1.4%) of the patients had caesarean hysterectomy from placenta praevia. Morbidly adherent placenta was present in 5(7.0%) of the patients and post partum haemorrhage was present in 4(5.6%) of the patients. Twenty eight(39.4%) were transfused with blood while 1(1.4%) patient received 6 units of blood.T wo(2.8%) of the babies had severe birth asphyxia while 16 (22.5%) and 8 (11.3%) had moderate and mild birth asphyxia, respectively. Extremely low birthweight was found in 2(2.8%) of the babies while 2(2.8%) and 26(36.6%) of the babies had very low and low birth weight respectively. Thirty eight(53.5%) of the babies were preterm. The perinatal mortality in this study was 8.5% but there was no case fatality.*

Conclusion: *Placenta praevia remains a major cause of perinatal morbidity and mortality. Effort should be made to prevent and modify the identified risk factors like uterine evacuation by dilatation and curettage.*

Key words: *Placenta praevia, risk factors, fetal, maternal, pregnancy outcomes.*

INTRODUCTION

Placenta praevia is the total or partial implantation of the placenta in the lower uterine segment [1,2]. It is a major cause of obstetric haemorrhage[3] and hence a major contributor to maternal mortality in our environment.

The incidence of this condition varies between 0.4-0.8% among the caucasians[1,2]. In Maiduguri, Northern Nigeria, the reported incidence was 2.6%[4] which compares with the reported rate of 1.2% in Cameroun[5]. The incidence increases with an advancing age, parity and previous caesarean delivery. Other risk factors include early pregnancy bleeding, multiple pregnancy, smoking, fundal fibroid, and myomectomy[1,2].

Traditionally, placenta praevia has been divided into four numbered grades (Types I-IV)[1,2] , but with modern management there is little point in distinguishing grade II and IV[1].Up to 14.6% of Nigerian pregnant women will have a low lying placenta in the first trimester but 85% of them will have a normally sited placenta at term[3]. This is explained by the phenomenon of placental migration. There is a reduced possibility of placental migration when the placenta lies low in the third trimester. Numerous reports have noted that between 60% and 70% of placenta praevia diagnosed at 30 weeks gestation were major placenta praevia at term[3].

Although up to 50% of cases may be asymptomatic[4], the usual presentation is unprovoked and painless vaginal bleeding in late pregnancy. The abdomen is usually soft and non tender with the fetal parts easily palpable. The fetus is usually alive. Placental localization by radiography or radioisotopes has become unpopular since the advent of ultrasound scan[2].Recently, magnetic resonance imaging (MRI) has been noted to be excellent at localizing the placenta without a risk to the fetus but it is still very expensive and not widely available.

Trans-vaginal ultrasonography is a safe, accurate and rapid technique which compliments trans-abdominal

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ultrasonography in the evaluation of patients with placenta praevia[6,7].Trans-vaginal ultrasonography has a higher positive predictive value for the detection of placenta praevia than trans-abdominal sonography [6,7,8].

In cases that present before term, the patient maybe admitted into a fully equipped and staffed hospital for conservative management while the fetus matures[1,2.] Some authors have, however, recommended an outpatient management in well selected patients[1,2,8].The recommended route of delivery in placenta praevia is caesarean delivery. However, the cervical os placental edge distance on trans-vaginal ultrasonography after 35 weeks gestation is valuable in planning the route of delivery[8].

Placenta praevia is a major cause of obstetric haemorrhage which is a major cause of maternal mortality especially in our environment[2].Identification of its risk factors will help in its prevention and knowledge of outcome will guide obstetricians in the management of pregnancies with placenta praevia.

The aims of this study are to determine the incidence, risk factors, fetal and maternal outcomes of pregnancies with placenta praevia in Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi, Nigeria.

PATIENTS AND METHODS

This was a retrospective study. The case records of all the patients with placenta praevia that delivered at the Nnamdi Azikiwe University Teaching Hospital, Nnewi, between 1st September, 2008 and 31st August, 2013 were retrieved from the medical records department and studied.
The labour ward admission registar was also assessed to determine the total number of deliveries within the study period.

The patients' records were analyzed for variables such as age, parity, gestational age at presentation and at delivery, mode of presentation, risk factors, APGAR scores, birthweight, perinatal and maternal mortality.
The data was analyzed using the SPSS version 16.0 software.

RESULTS

There were a total of 5465 deliveries during the period under review. Out of these, 2100 were caesarean deliveries while 3365 were vaginal deliveries. Ninety eight of deliveries were from placenta praevia and only 71 of the patients' case files were available for analysis. The incidence of placenta praevia in this study was 1.8%, that is, 1 in 55.8 deliveries. The age of the patients ranged from 18 to 40 years while the parity ranged from 1 to 8. The predominant age group was 30-39 years which had 41 (57.7%) patients. Majority, 46 (64.8%), of the patients were para 1-4. The mean age and parity of the patients were 30.2± 5.8 and 1.8 ± 1.9, respectively(table 1).

TABLE 1: AGE AND PARITY DISTRIBUTION OF THE WOMEN WITH PLACENTA PRAEVIA. N=71

Age Group(years)	Frequency	Percentage
< 20	4	5.6
20-29	24	33.8
30-39	41	57.8
40-49	2	2.8
Mean Age =30.2 ± 5.8		
Parity		
0	19	26.8
1-4	46	64.8
>4	6	8.4
Mean Parity = 1.8 ± 1.9		

Majority,49 (69.0%), of the patients were unbooked. The mean gestational ages at presentation and at delivery were 34.4 ± 4.0 and 35.5 ± 3.7 weeks respectively. The commonest mode of presentation was vaginal bleeding in 63 (88.7%) patients. Breech presentation was found in 14 (19.7%) of the women.

The commonest identified risk factor was termination of pregnancy by dilatation and curettage in 19 (26.8%) women (table 2). However, there was no identified risk factor in 23 (32.4%) women.Type II placenta praevia was the commonest type found in 34 (47.9%) women (table 3).

TABLE 2: RISK FACTORS FOR PLACENTA PRAEVIA. N= 71

Variable	Frequency	Percentage
Previous caesarean section	15	21.1
Previous placenta praevia	3	4.2
Previous dilatation and curettage	19	26.8
Multiple pregnancy	4	5.6
Uterine fibroid	6	8.5
Previous myomectomy	1	1.4
No identified risk factor	23	32.4

TABLE 3: DISTRIBUTION OF TYPES OF PLACENTA PRAEVIA. N= 71

Types	Frequency	Percentage
1	6	8.5
2	34	47.9
3	17	23.9
4	14	19.7

Majority of the women, 70 (98.6%), delivered by caesarean section. Therefore, 3.3% of all caesarean sections during the period of the study were due to placenta praevia. Only 1(1.4%) of the women had caesarean hysterectomy from placenta praevia. Morbidly adherent placenta was present in 5 (7.0%) of the women and post partum haemorrhage was present in 4 (5.6%) of the women. Twenty eight (39.4%) were transfused with blood out of which 1 (1.4%) woman received 6 units of blood.

Two (2.8%) of the babies had severe birth asphyxia while 16 (22.5%) and 8 (11.3%) had moderate and mild birth asphyxia, respectively (figure 1).Extremely low birthweight was found in 2 (2.8%) of the babies while 2 (2.8%) and 26 (36.6%) of the babies had very low and low birthweight respectively (figure 2).Thirty eight (53.5%) of the babies were preterm. The perinatal mortality in this study was 8.5%; but, there was no case fatality.

Figure 1: APGAR score distribution

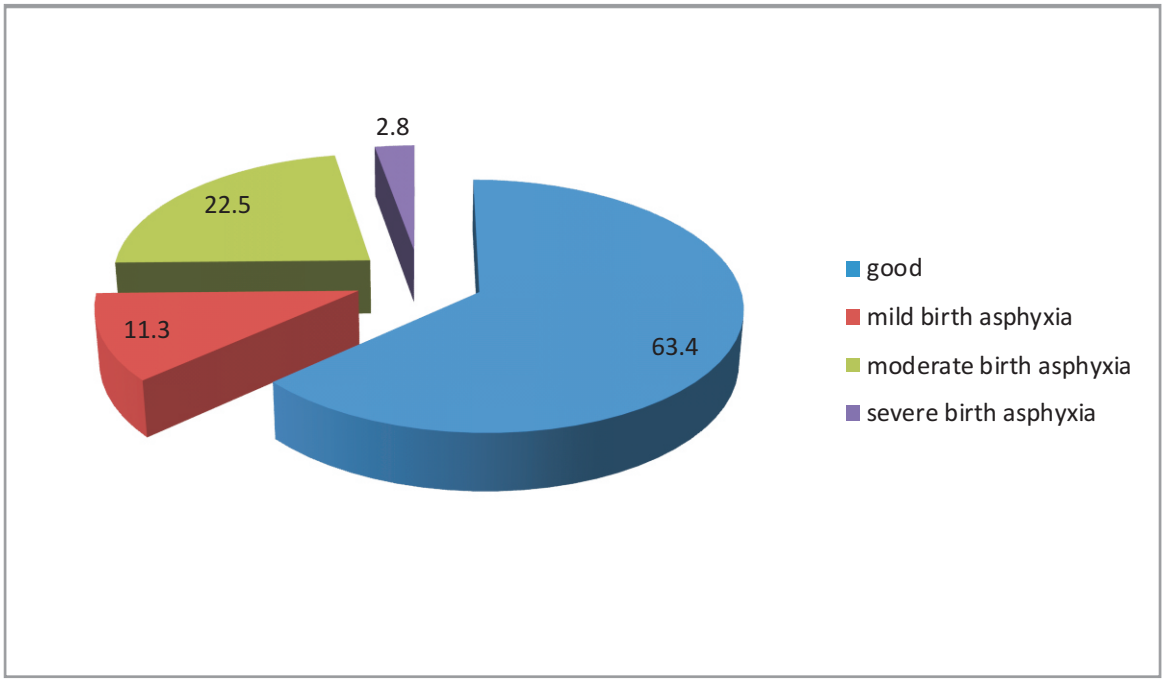
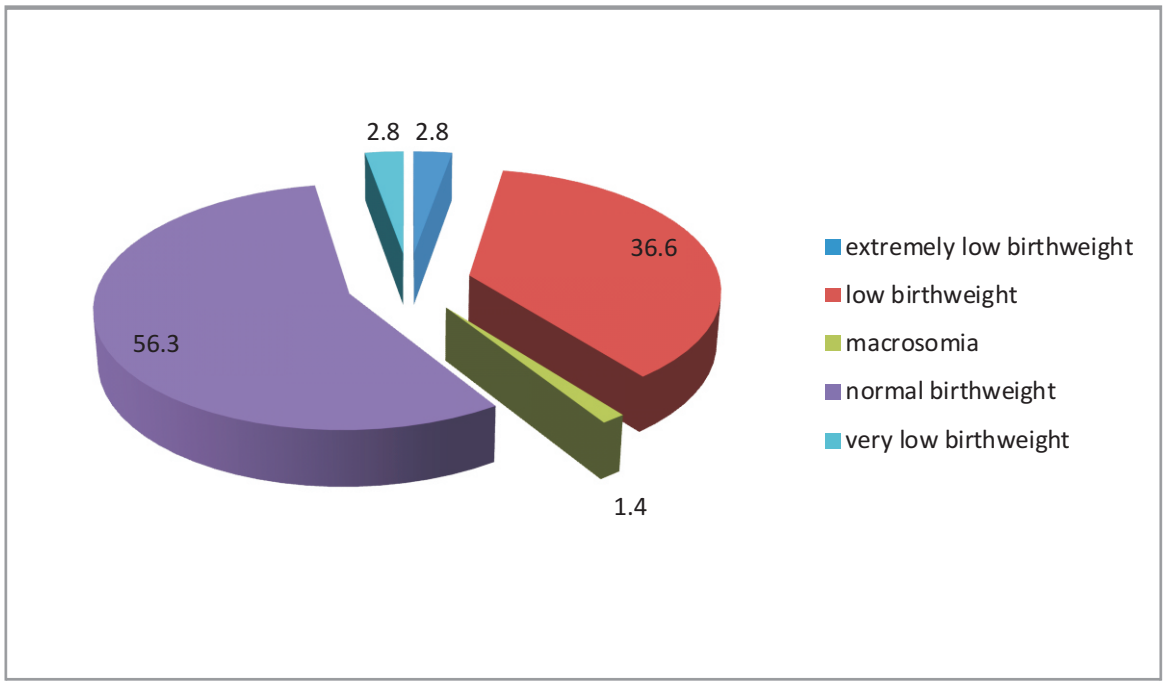


Figure 2: Birthweight Distribution



DISCUSSION

The incidence of placenta praevia in this study was 1.8%, or 1 in 55.8 deliveries. This is similar to another hospital based study in Nnewi, Nigeria, which was 1.65%[9] and another study in Abidjan, Cote d'Ivoire, which was 1.6%[10]. However, it was higher than other hospital based studies in Chojnice, Poland, which was 0.2%[11], and Jos, Nigeria, which was 0.89%[12].

The predominant age group was 30-39 years which was similar to the ones found in other hospital based studies [10,11].The commonest type of placenta praevia found in this study was type II which was different from the one found in another study which was type III[9]. Uterine evacuation with dilatation and curettage was the commonest risk factor found in this study. This was similar to the finding in the study by Nyango et al[12]. However, it was not in agreement with another study in Nnewi, Nigeria, which found previous uterine scar as the commonest risk factor[9]. This may be explained by the increasing cases of unsafe abortion in our environment[16].There was no risk factor in 32.4% of the patients which compares with the finding of the study in Jos, Nigeria[12].

Antepartum haemorrhage was the commonest mode of presentation in this study. This compares with the previous study in Nnewi, Nigeria[9]. Caesarean section was the commonest mode of delivery in the present study. This is similar to several other studies [9,10,12,13]. Placenta praevia was the indication for caesarean section in 3.3% of all caesarean sections. This is similar with the findings in other studies by Boyle et al[14], which was 3.2%, and Onwere et al[15], which was 3.3%. There was only one caesarean hysterectomy in the present study, which is the same with the study by Ikechebelu et al[9].

Twenty eight patients were transfused in the present study which is higher than the 12 patients transfused in another study[9]. Low birthweight was found in 26 (36.6%) of the babies. This is higher than another hospital based study, which was 27.3%[9]. Majority (53.5%) of the babies were preterm, which compares with another study, which was 43.8% of the babies[10].

The perinatal mortality in this study was 8.5%, which was lower than the finding from another hospital based study, which was 21.3%[10].This may be due to improved neonatal facility in the place of present study. There was no maternal mortality in the present study. This may be due to improved quality of obstetric care and blood transfusion services in the place of the present study.

CONCLUSION

In conclusion, placenta praevia remains a major cause of perinatal morbidity and mortality. Effort should be made to prevent and modify the identified risk factors like uterine evacuation by dilatation and curettage. There should also be more improvement in our blood transfusion services.

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