ORIGINAL ARTICLE

PLACENTA PRAEVIA: Review of Clinical Presentation and Management in a Nigerian Teaching Hospital.

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ABSTRACT:

Background*: The study aims at reviewing the clinical presentation and management of placenta praevia in a tertiary health facility.*

Method*: This is a retrospective study of 59 cases of placenta praevia managed at the Nnamdi Azikiwe University Teaching Hospital, Nnewi from January 1997 to December 2001. The case records of 44 of the patients were obtained from the hospital medical records department and analysed.*

Results*: During the five year period, there were 3565 deliveries and 59 cases of placenta praevia giving an incidence of 1.65%. Thirty four (77.3%) occurred in women aged 35 years and below. The commonest was type III (12 cases; 27.3%) followed by type IV (10 cases; 22.7%). Previous uterine scar was associated with 22 (50.0%) cases. Age had no statistically significant effect on the prevalence. The commonest GA range at presentation (13; 29.6%) and at delivery (18; 40.9%) was 37–40 weeks. The commonest mode of presentation was antepartum haemorrhage (34;77.3%) followed by abnormal lie and malpresentation (4 each; 9.1%). The average admission delivery interval was one week in 33 (75.0%) cases and only two (4.5%) received blood transfusion. Forty (90.9%) women had caesarean delivery while 12 (27.3%) babies were of low birth weight. There were only 2 (4.5%) fetal deaths and one (2.3%) caesarean hysterectomy.*

Conclusion: *The commonest predisposing factor to placenta praevia in this study is previous uterine scar. Judicious use of caesarean section especially in the primigravida will help reduce the incidence of placenta praevia. Also a screening ultrasonography at 34–36 weeks gestation (especially in women with previously scarred uterus) is recommended.*

Key Words: *Placenta praevia, Antepartum Haemorrhage, Presentation, Outcome.*

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INTRODUCTION

Placenta praevia is a common cause of obstetric haemorrhage with associated maternal morbidity[1]. Other causes of obstetric haemorrhage are abruptio placenta and incidental causes. If well managed, placenta praevia rarely results to maternal or fetal mortality. Placenta praevia, like every other high risk pregnancy requires specialist care. This means that the required manpower and blood banking service must be available. It also requires a lot of cooperation from the patient and her family for her to be hospitalised and managed conservatively before the delivery. The regimen favourably adopted for the management is Macafee regimen;[2] and one of the conditions is admission for bed rest. In developed countries with very good communication net work and obstetric services home management may be possible and the fetal and maternal outcome is better than in developing countries[3].

The aim of this study was to review clinical presentation of placenta praevia and its management in our hospital and suggest means of improvement in its outcome.

PATIENTS AND METHOD

The case notes of 44 patients out of 59 who were managed for placenta praevia at Nnamdi Azikiwe University Teaching Hospital Nnewi from January 1997 to December 2001 were retrieved from the medical records department of the hospital and analysed for this study. The remaining 15 case notes were not available and were not included in the final analysis.

The information extracted from the case notes include age, parity, occupation, level of education, method of presentation, type of placenta praevia and predisposing factors. Also analysed were the gestational age at presentation and delivery, admission delivery interval, need for blood transfusion, and the feto-maternal outcome. Further information was

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obtained from the labour ward and obstetric theatre records where necessary.

The data is presented in tables and compared with simple percentages. Chi square was used as a test of significance where necessary. P value < 0.05 was regarded as significant.

RESULTS:

Out of the 44 cases analysed, 34 (77.3%) of the cases occurred in women aged 35 years and below while the remaining 10 (22.7%) occurred in patients above 35 years (table I). The prevalence between the age groups is not statistically significant (P > 0.05). Table I also shows the parity distribution with the highest incidence of 27.3% (12 women) in Para 1 group. The primigravida had 18.2% (8 women) prevalence while the multipara (Para 2 to 4) had 38.7% (17 women) and the grand multipara had 15.9% (7 women). Thirty four (77.3%) women had low socioeconomic status while 6 (13.6%) and 4 (9.1%) were of middle and high socioeconomic classes respectively as determined from their occupation and level of education.

Table II shows the gestational age at presentation with 18 women (40.9%) presenting at term and 26 women (59.1%) at preterm (between 28 and 36 weeks). There was a rising incidence of placenta praevia with increasing gestational age up to 40 weeks. At the time of delivery, 23 (52.3%) women were term and 21 women (47.7%) were still preterm. The mean GA at presentation is 34.7 weeks and at delivery it increased to 35.7 weeks.

Table III shows that the commonest clinical presentation was antepartum haemorrhage in 34 patients (77.3%). The clinical diagnosis was confirmed by ultrasonography in 38 women (86.4%) and by double set up technique in 6 women (13.6%). Table III also shows the risk factors encountered. Twenty two (50%) cases were associated with scarred uterus with the major contribution coming from previous caesarean scar (14 cases; 31.8%). The least contributor was previous myomectomy scar (1 case; 2.3%). Other risk factors like previous placenta praevia were not encountered.

Macafee regimen was adopted in the management of all the patients. The admission delivery interval was less than or equal to one week in 33 (75.0%) patients and more than one week in 11 (25.0%) patients. Caesarean section was performed for 40 (90.9%) patients and the rest 4 (9.1%) patients had vaginal delivery. Twenty five (56.8%) patients had major placenta praevia while 19(43.2%) had minor type. Type III was the commonest type with 27.3%.

The fetal birth weights showed that 32 babies (72.7%) were of normal birth weight (≥ 2.5 kg) and 12 babies (27.3%) were of low birth weight (< 2.5 kg). The number of babies decreased with increasing birth weight. There were 2 (4.5%) fetal deaths (perinatal deaths) due to prematurity and no maternal death. There was need for blood transfusion in only 2 (4.5%) patients and one patient (2.3%) had caesarean hysterectomy due to uncontrollable haemorrhage.

Table I: **Age and parity distribution of patients with placenta praevia**

Age range	***No of patients***	***Percent***
21 – 25	12	27.3
26 – 30	10	22.7
31 – 35	12	27.3
36 – 40	9	20.5
41 – 45	1	2.3
Total 44		**100.0**
Parity		
0	8	18.2
1	12	27.3
2	5	11.4
3	9	20.5
4	3	6.8
≥5	7	15.9
Total 44		**100.0**

Table II: **Gestational age of patients with placenta praevia at diagnosis and at delivery.**

Gestational Age	***At Presentation No. (%)***	***At Delivery No. (%)***
28 - 30	10 (22.7%)	5 (11.4%)
31 - 33	8 (18.2%)	8 (18.2%)
34 - 36	8 (18.2%)	8 (18.2%)
37 - 40	13 (29.6%)	18 (40.9%)
41 - 42	5 (11.4%)	5 (11.4%)
Total	**44 (100%)**	**44 (100%)**

Table III: **Mode of Presentation and risk factors for patients with placenta praevia**

Mode of Presentation	*No. of patients*	*Percent*
Ante Partum Haemorrhage	34	77.3
Abnormal lie & Malpresentation	8	18.2
High presenting part	2	4.5
Total	**44**	**100.0**
Risk factors		
Previous Caesarean Scar	14	31.8
Previous Endometrial Curettage	7	15.9
Previous Myomectomy scar	1	2.3
Unscarred uterus	22	50.0
Total	**44**	**100.0**

DISCUSSION

Placenta praevia, as a cause of antepartum haemorrhage, gives rise to maternal anxiety often due to prolonged admission, possibility of caesarean delivery and blood transfusion. The incidence from other studies ranged from 0.4 – 1%[2,3]. The incidence of 1.65% in this study did not differ significantly from result of other studies. Major (56.8%) and minor (43.2%) placenta praevia were common with type III being the commonest (27.3%). This agrees with the work of Love and Wallace[2].

Placenta praevia has a strong association with previous scar on the uterus including caesarean section, myomectomy, endometrial curettage and reconstructive surgery in the uterine cavity. The risk increases with number of scar[2,4,5]. The present study also confirmed this with up to 50% of cases associated with previous scar on the uterus. The association with high parity was not the case in this study but rather lower parity, (≤ para 4; 81.8%). This finding is different from the findings of most other workers who reported a strong association with high parity[5,6]. A cohort study will be needed to determine whether low parity or previous scar is the determinant factor. The prevalence between the age groups is not statistically significant (P > 0.05) therefore age had no strong association with placenta praevia in this study. This differs from the finding of other studies[5,7]. Multiple pregnancy was associated with only 9% of our cases, Ananth et al[7] found a strong association with multiple births. Other risk factors like marital status, smoking / substance abuse and use of alcohol were not studied.

The mean gestational age of 34.7 weeks at which our patients presented (with two out of five presenting at term) was late compared to other studies[8]. Majority (75%) therefore were delivered within one week of admission. The prolonged admission delivery interval reported by Towers et al was due to the early presentation and use of tocolysis in their series[9]. Early diagnosis by early and repeated ultrasound studies is advocated in our practice to increase the pick up of the asymptomatic cases. Ultrasound is readily available in our centre and was used in diagnosis of 86.4% of cases when they presented.

The commonest form of presentation of placenta praevia is antepartum haemorrhage followed by abnormal lie and malpresentation[9] as revealed in this study. Before the advent of ultrasound, double set up played an important role in the management of placenta praevia but presently it does play a very small role in determining the mode of delivery of minor types after conservative management at maturity.

Macafee regimen, which entailed hospital admission of patients with antepartum haemorrhage due to placenta praevia and transfusion of blood if there is significant bleeding till fetal maturity or feto-maternal compromise, was adopted in all cases[10]. This helps to overcome the problem of accessibility in times of severe haemorrhage at home and risk of preterm labour. In developed countries, with very good emergency obstetric care, home management of selected cases is an option while cases presenting with significant bleeding, previous second trimester bleeding and painful uterine contractions are admitted for aggressive management including tocolysis[11]. Caesarean section was the mode of delivery in 90.9% of our patients because 56.8% (25 out of 44) had major degree placenta praevia[9].

The incidence of blood transfusion was 4.5% and only one caesarean hysterectomy and two (4.5%) fetal deaths were recorded. The zero maternal death recorded in this series could be attributed to multiple factors like the caesarean deliveries being done by the consultant or the senior registrar with skill for hysterectomy, availability of blood transfusion, rapid response and good emergency obstetric care.

The incidence of low birth weight of 27.3% could be because of the contribution of preterm deliveries. Some other studies have not shown any strong association of low birth with placenta praevia.[12]

In conclusion, placenta praevia could be called a disease of previously scarred uterus and not necessarily of grandimultipara. Hence every pregnant patient with previous uterine scar should ideally have a screening ultrasonography after 28 weeks and at 34 – 36 weeks of gestation to pick the asymptomatic placenta praevia which may pose management problem.

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