

PLACENTA PRAEVIA AT THE OBAFEMI AWOLOWO UNIVERSITY TEACHING HOSPITALS COMPLEX, ILE-IFE. A TEN YEAR ANALYSIS.

O Loto, T G Onile

Department of Obstetrics and Gynaecology, OAUTH.C ILE-IFE.

ABSTRACT

Context: Placenta praevia is one of the obstetric emergencies associated with maternal mortality and morbidity. It is also a major cause of prematurity. With prompt and appropriate management the complication can be drastically reduced.

Objective: The objective of this study is to document the pattern of presentation, mode of management and the outcome of the management of placenta praevia at Obafemi Awolowo Teaching Hospitals Complex (I.H.U.), Ile-Ife between January, 1996 to December, 2005. The outcome will help in identifying the women at risk and offer suggestions to reduce the associated complications.

Materials and Methods: The study involved a ten-year retrospective analysis of the data collected from the case records of all the cases diagnosed as having placenta praevia during the period under review.

Results: During this period there were 7,515 deliveries and a total of 128 cases of placenta praevia giving an incidence of 1.65% i.e. 3 in 200 births. Majority (58.2%) of patients with placenta praevia were unbooked and 77.4% of them were multiparous. Only 20.2% were accessible for diagnosis by ultrasound scanning, while 25.8% of them were delivered before 36 weeks of gestation. The perinatal mortality rate was 177 per 1000 births.

Conclusion: Placenta praevia is still a major cause of obstetric morbidity and mortality. The diagnosis can be made with routine ultrasound scanning which then allows patient identification and institution of appropriate and comprehensive treatment aimed at minimizing complications. The role of good referral system, 24 hours blood banking services and facilities for caesarean section and adequate neonatal backup in preventing morbidity and mortality associated with the condition can not be over emphasized.

Key words : Placenta praevia, maternal and perinatal outcome.

(Accepted 10 May 2007)

INTRODUCTION

Maternal mortality constitutes a major problem in Nigeria even more than a decade after the safe motherhood conference in Nairobi in 1987¹. The continuing tragedy of maternal deaths in the developing countries led to the inclusion in the united nation millennium goals, the reduction of maternal mortality by 75% by the year 2015. Regrettably, however, most of the causes of maternal death are preventable with obstetric haemorrhage including antepartum haemorrhage from placenta praevia remaining a major cause^{1,2,3}. Placenta praevia is associated with high perinatal morbidity and mortality partly due to increased incidence of prematurity and poor neonatal backup

in our environment^{4,5}. Placenta praevia is defined as placenta that is wholly or partially located in the lower uterine segment^{1,2,6}. It can be classified into type I to IV depending on its relationship to the internal cervical os. It can be further classified as a or b, if the placenta is located anterior or posterior in the lower uterine segment. Type I and IIa are referred to as minor placenta praevia in which vaginal delivery may still be possible, provided there is no significant bleeding. While IIb to IV are referred to as major placenta praevia.^{1,2,3,6}

The incidence of placenta praevia generally is approximately 1 in 200 births^{3,6}. The risk factors associated with the occurrence of placenta praevia in studies around the world include multiparity, increase in maternal age, previous uterine surgery including caesarean section. Others are intrauterine synechiae, multiple pregnancy,

Correspondence: Dr O Loto
E-Mail bisiloto@yahoo.co.uk

abnormalities of uterine vascularisation and prior trauma to the endometrium or myometrium such as following dilatation and curettage^{1,2,3,6}. The diagnosis is usually suspected when there is antepartum haemorrhage which is usually painless and the fetus is usually not compromised. Ultrasound scanning is very important in confirming the diagnosis and for determination of the degree of placenta Praevia in up to 95% of cases and has since replaced earlier methods of placental localization such as soft tissue placentography, pelvic arteriography and isotope techniques^{1,2,3,6}. Magnetic Resonance Imaging (MRI) may be the most precise method of diagnosis but it is an expensive method of tissue imaging and not readily available in our environment^{1,3}. The management of placenta praevia depends on many factors. These include the amount of uterine bleeding when present, the viability of the fetus as well as the degree of the placenta praevia.³ Hospital admission is advised once the diagnosis is made and ideally the patient should remain in hospital till delivery³. Two or more units of screened and compatible banked blood should be crossmatched and made ready for transfusion^{1,2,3,6}. Expectant management is indicated, if the gestational age is less than 36 weeks and bleeding is minimal^{1,3,6}. Emergency caesarean section is however, indicated if the patient is at term, and major placenta praevia is confirmed². Examination under anaesthesia is still relevant in our environment where mobile ultrasound facilities are not readily available, if the diagnosis is in doubt². This study documents the pattern of placenta praevia at the Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, with the aim of identifying the women at risk and offer suggestions to reduce the incidence of perinatal and maternal morbidity and mortality.

MATERIALS AND METHOD

The case records of the patient managed for placenta praevia at Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, from January 1996 to December 2005 were reviewed. During this period there were 7,515 deliveries and 128 cases of placenta praevia of which only 124 case notes were available for analysis. The diagnosis of placenta praevia were made based on findings at examination under anaesthesia and caesarean section, routine ultrasound scanning or on ultrasound scanning done following antepartum haemorrhage. Incidental findings of placenta praevia at caesarean section for other indications were included. Data related to parity, booking status, means of diagnosis, gestational age at delivery, mode of delivery as well as fetal outcome were obtained and analysed. Statistical analysis was by simple percentage calculations.

RESULTS

During the 10 year period, there were 128 cases diagnosed with placenta praevia and there were 7,515 deliveries giving an incidence of 1.68% or 3 per 200 births. There were no cases of maternal mortality due to placenta praevia but there were 23 cases of perinatal death, a perinatal mortality of 177 per 1000 births. Perinatal mortality due to placenta praevia for the first 5 years of the study was 176 per 1000 births while for the last 5 years was 178 per 1000 births. Table I shows that 77.4% of the patients were multipara and 22.6% were primipara. The age distribution of the patients is as shown on table I. There was no relationship between the type of placenta Praevia and maternal age and parity among the subjects. Forty seven (37.9%) of the patients had to receive blood transfusion with 31 (25%) receiving two or more units of blood.

Seventy two (58.1%) of the patients with placenta praevia were unbooked for antenatal care while 52 (41.9%) were booked. The diagnosis was made clinically in 96 (77.4%) of the patients who presented with antepartum haemorrhage, while diagnosis was made with routine ultrasound scanning in 25 (20.2%) of the patients.

The remaining 3 (2.4%) were found incidentally at caesarean section for other indications having been asymptomatic.

Table II shows that 25.8% of the patients were delivered before 36 weeks of gestation and 58.9% were delivered between 36-39 weeks of gestation. Nine (7.3%) of the patients had vaginal delivery while 115 (92.7%) had caesarean section with majority (75%) being emergency caesarean sections.

Table III shows that 68.5% of the patients had major type placenta praevia while only 31.5% had minor placenta praevia.

Twenty three (17.6%) of babies delivered to the patient managed with placenta praevia had perinatal death. The large proportions (69.3%) of those with perinatal death were unbooked for antenatal care and majority of deaths were due to prematurity.

Table I: Age and Parity Distribution in Patients with Placenta Praevia

Age(years)	Number	Percentage(%)
15-19	5	4.0
20-24	14	11.3
25-29	43	34.7
30-34	40	32.3
35-39	15	12.1
40-44	7	5.6
Total	124	100

Parity	Number	Percentage(%)
1	28	22.6
2	33	26.2
3	31	25.0
4	22	17.8
5 and above	10	8.0
Total	124	100.0

Table II: Mode of Delivery and Gestational Age at Delivery

Mode of Delivery	Number	Percentage(%)
Vaginal delivery	9	7.3
Caesarean section	115	92.7
A. elective	22	17.7
B. Emergency	93	75
Total	124	100
Gestational Age(weeks)	Number	Percentage(%)
28-31	7	5.6
32-35	25	20.2
36-39	73	58.9
40 and above	19	15.3
Total	124	100.0

Table III: Degree of Placenta Praevia

Degree(Type)	Number	Percentage(%)
I	13	10.5
Ila	26	21.0
Ilb	34	27.4
III	33	26.6
IV	18	14.5
Total	124	100.0

DISCUSSION

Though, the morbidity and mortality associated with postpartum haemorrhage can be prevented by active management of the third stage of labour, the same cannot be said of placenta praevia. Therefore, it is necessary for all our pregnant women to book for antenatal care in a health facility, where this condition can be diagnosed and appropriate referral made if necessary.

The incidence of placenta praevia in this study was 3 per 200 births. The study done at Ibadan quoted a similar incidence of 2 per 200 births⁷. In the series from the Lagos Island Maternity Hospital, there was a low incidence of 0.18 per 200 births². Population based study in United State of America quoted an incidence ranging from 0.5 2.0 per 200 births⁵. The incidence was slightly higher in this study, this may be because our hospital is a referral center and moreover, majority of uncomplicated deliveries takes place outside the hospital facilities in Nigeria, hence most of the complicated cases present in the referral centres. Placenta praevia is associated with increase parity as in this study where 77.4% of the patients were multiparous women. An earlier study done at Ile-Ife concluded that the risk factors for placenta praevia were increased parity, history of retained placenta, previous caesarean section, previous abortion and maternal age over 35 years^{8,9}.

In 77.4% of patients in this study, diagnosis of Placenta praevia was suspected after they had presented with antepartum haemorrhage. However, in Britain only about 30-40% of their patients with placenta praevia presented with antepartum haemorrhage¹⁰. This may be due to the policy of a routine ultrasound scanning in second and third trimester in that country. Therefore, the diagnosis is usually made before the onset of antepartum haemorrhage and appropriate management instituted to prevent it. The proportion of major placental Praevia is higher (68.5%) in this study compared to what was obtained in Britain, where routine ultrasound scanning is practiced¹⁰. This may be because about 80% of deliveries in Nigeria take place outside the hospital facilities¹¹ and substantial number of the minor placental Praevia will achieve uncomplicated vaginal delivery and would have gone undiagnosed. Moreover ultrasound is not readily available outside major health facilities and can be relatively expensive. Prematurity contribute significantly to the high perinatal mortality and morbidity associated with placenta praevia^{1-6,10,12-17}. As much as 25.8 percent of the women in this study were delivered before 36 weeks of gestation. Placenta praevia was the second commonest indication for preterm caesarean section after pre-eclampsia in the study done in Enugu⁶. This finding was also in keeping with population-based study in the United States of America where placenta praevia constitute a major cause of preterm delivery⁵.

There was no maternal death due to placenta praevia during the period under review. This may be attributable to the availability of effective 24-hour blood banking services and quick surgical intervention in our center. However, the perinatal mortality was very high, about 176 per 1000 births in this study. The perinatal mortality rates from placenta praevia have however fallen steadily from 370 per 1000 in 1973 to 81 per 1000 in 1985 in Britain¹⁰. The population based study in United State of America quoted perinatal mortality of 10.7 per 1000 births⁵. The high perinatal mortality in this study may be attributable to our poor neonatal back up, poor socioeconomic factor and the fact that majority of the patients present late in the hospital. In conclusion, placenta praevia is still a major cause of obstetric morbidity and mortality in our environment. The diagnosis can be made with routine ultrasound scanning in third trimester and measures could be taken to forestall the complication.^{1,3,5,6}, hence we recommend routine ultrasound scanning in the third trimester for placental localization. Training and retraining of health workers on recognition of high risk pregnancy as well

as adequate referral system and improved neonatal care will go a long way in reducing the morbidity and mortality associated with this condition.¹⁸ Health education of the populace on the importance of antenatal care and the safety of hospital delivery should be emphasized.¹⁸ Women empowerment and improved socio-economic status will impact positively on our reproductive health

REFERENCES

1. **Kwawukume EY.** Antepartum haemorrhage (APH). In: *Comprehensive Obstetrics in the Tropics.* Kwawukume EY & Emuveyan EE (Eds). Asante & Hittscher Printing Press Ltd., Dansoman. 2002: 140-150.
2. **Agboola A.** Antepartum haemorrhage. In: *Textbook of Obstetrics and Gynaecology for Medical Students Vol.2.* Agboola A. (Ed) Heinemann Educational Books (Nigeria) Plc. Ibadan. 2001. Pp 95-104.
3. **Claydon C, Pernoll ML.** Third-Trimester haemorrhage. In: *Current Obstetric and Gynaecologic Diagnosis & Treatment.* 9th edition. DeCherney AH & Nathan L (Eds). Lange Medical Books/McGraw-Hill, New York, 2003: 354-368.
4. **Ozumba BC, Mbadiwe IJ.** Preterm caesarean section in Nigerian Obstetric Practice. *J. Nat. Med. Assoc.* 1993. 85(1): 857-860.
5. **Ananth CV, Smulian JC, Ventzileos AM.** The effect of placenta praevia on neonatal mortality: a population-based study in the United States, 1989 through 1997. *Am J. Obstet. Gynaecol.* 2003; 188(5): 1299-1304.
6. **Neilson JP.** Antepartum haemorrhage. In: *Dewhurst's Textbook of Obstetrics and Gynaecology for Postgraduates,* 6th ed. D.K. Edmonds (ed). Blackwell Science Ltd. London, 1999: 134-144.
7. **Obed JY, Adewole IF.** Antepartum Haemorrhage: the influence of first trimester Bleeding. *West Afr. J. Med.* 1997: 16(1): 24-26.
8. **Eniola AO, Bako AU., Selo-Ojeme DO.** Risk Factors for Placenta Praevia in Southern Nigeria. *East Afr. Med. J.* 2002. 79(10): 535-538.
9. **Dare FO, Oboro VO.** Risk factors of placenta accreta in Ile-Ife, Nigeria. In: *Nig. Postgrad. Med. J.* 2003. 10(1): 42-45.
10. **Penna LK, Pearce JM.** Placenta praevia. In: *Progress in Obstetrics and Gynaecology Vol.II.* John Studd (ed.). Churchill Livingstone, Edinburgh 1994: 161-183.
11. Federal Office of Statistics: *Nigeria Demographic and Health Survey 1990.* DHS IRD/Macro International, Inc. 1992.
12. **Nzeh DA., Adetoro OO.** Value of ultrasonic placental localization in Pregnancy after caesarean section. *Cent. Afr. J. Med.* 1990. 36 (8): 193-195.
13. **Barron SL.** Antepartum haemorrhage. In: *Obstetrics.* Sir Turnbull & Chamberlain GC (eds). Churchill Livingstone, Edinburgh 1989: 469-482.
14. **Myerscough PR.** Antepartum haemorrhage. Placenta praevia. In: *Munro Kerr's Operative Obstetrics.* 10th ed. Bailliere Tindall, London. 1982: 400-414.
15. **Omu AE, Diejomaoh FME, Omene JAA.** The influence of management of placenta praevia on fetal and maternal outcome in a Nigerian Community. *Singapore Journal of Obstetrics and Gynaecology.* 1981; 12: 31-37.
16. **Green-Thompson RW.** Antepartum haemorrhage (ApH). In: *Clinics in Obstetrics and Gynaecology.* Philpott RH (Eds). 1982: 93.
17. **Campbell S, Lees C.** Antenatal Obstetric complications. In: *Obstetrics by Ten Teachers.* Arnold 2000: 208-209
18. *Safe Motherhood: Preventing the tragedy of maternal deaths. A report on International Safe Motherhood Conference, Nairobi 1987.*