

Placenta Accreta In Aba, South Eastern, Nigeria.

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Background: Placenta accreta is a rare and challenging complication of pregnancy associated with increased maternal morbidity and mortality, loss of reproductive organs and high demands on health resources. The objective of this study was to identify the incidence, demographic characteristics, and mode of treatment of patients with placenta accreta.

Methods: A prospective descriptive study of 11 cases of placenta accreta seen at Nigerian Christian Hospital Aba, Nigeria between January 2002 and December 2005.

Results: The incidence of placenta accreta was 1 in 282 deliveries (0.35%). Median maternal age was 30 years, with a median parity of 3. The associated risk factors observed were: previous caesarean section (82%); placenta praevia (73%) and previous uterine curettage (54.5%). No antenatal diagnosis was achieved as all cases were either diagnosed at surgery or manual removal of placenta. The total estimated intra-operative blood loss for all the 11 cases was 24,500 mls, with a median of 2000 mls. The total number of units of blood transfused was 46 with a median of 4. Emergency hysterectomy was carried out in 72.7% of the patients. There was one maternal death (9%) and three perinatal deaths (27%).

Conclusion Placenta accreta is a major cause of obstetric haemorrhage and loss of reproductive organ with a huge demand on our meager health resources. It should be considered a possibility in women with previous caesarean section and placenta praevia.

Introduction

Placenta accreta is a condition, in which the trophoblast is adherent to the myometrium without intervening decidua. Further, the trophoblast may invade and even penetrate the entire myometrial layer to or through the serosa, conditions known as placenta increta and placenta percreta, respectively.

It is a rare complication of pregnancy associated with increased maternal morbidity/mortality, loss of reproductive organs and high demands on health resources.¹⁻⁶

Risk factors associated with placenta accreta include; placenta praevia, previous caesarean section, previous uterine curettage, advanced maternal age, Asherman's syndrome, previous trophoblastic disease, multiple pregnancy, pelvic irradiation and abnormally elevated second-trimester alpha fetal protein and free β -human chorionic gonadotrophin.⁶⁻¹¹

In developed countries, the increasing caesarean section rate has been associated with a corresponding increase in the incidence of placenta accreta.^{1,3,11}

In Nigeria, an increasing caesarean section rate has been reported from different regions, indicating also that the incidence of placenta accreta may be on the increase.¹²⁻¹⁴

This preliminary baseline study was undertaken to identify the incidence, demographic characteristics and mode of treatment of patients with placenta accreta in our environment.

MATERIALS AND METHODS

This is a prospective descriptive study of 11 cases of placenta accreta seen at Nigerian Christian Hospital, Aba Nigeria between January 2002 and December 2005. The study site is a mission hospital situated at kilometer 18 along Aba-Ikot-ekpene road. It serves as a general hospital and a referral center in obstetrics, gynaecologic and general surgery for Abia south and the neighboring rural communities of Akwa Ibom state. It has two specialist obstetric and gynaecologic staff, a consultant surgeon and a nurse anaesthetist capable of performing general anaesthesia with intubation. The average yearly antenatal clinic attendance is 2500 and about 840 deliveries are carried out in it annually. Placenta accreta was defined clinically as well as histologically by one of the following:

- (1) Failure to find a cleavage plane for placenta at manual removal or caesarean section leading to piece meal removal of placenta and/or persistent bleeding.

(2) Placenta completely replacing a segment or portion of the uterus with or without extension to adjoining pelvic organs.

(3) Histopathologic confirmation on a hysterectomy specimen.

The consultant obstetricians made all clinical definitions.

Using a work sheet, the relevant information on each case was obtained from history on admission, delivery and operative records and the duration of hospital stay of each case was noted on discharge. Details obtained on the patients included age, parity, gestational age, booking status, previous uterine curettage or surgery, previous manual removal of placenta, previous caesarean section, mode of presentation, associated placenta praevia; associated pelvic organ involvement, estimated blood loss, number of units of blood transfused, type of treatment, post-operative complication, maternal and perinatal outcome.

RESULTS

There were 3098 deliveries at Nigerian Christian Hospital, Aba during the study period. There were 1075 caesarean sections giving a rate 34.7%. Six hundred and ninety-one (64%) caesarean deliveries were primary procedures while three hundred and eighty-four (36%) were repeat caesarean sections. Eight (0.7%) caesarean sections were in those with placenta accreta.

There were 11 cases of placenta accreta during the study period giving an overall incidence of 1 in 282 deliveries. Eight of the cases were confirmed to be placenta accreta by histopathological examination of hysterectomy specimens while 3 were diagnosed by clinical criteria.

The modal age of the patients was 21-30 and the median age was 30 years (range; 27-39). Only 3 of the patients were aged 35 years and above.

Nine (82%) patients were of parity 1-4 with a median parity of 3. Majority of the patients (64%) were unbooked. The median gestational age was 38 weeks (range, 28-41).

The associated risk factors observed included previous caesarean section (82%); placenta praevia(73%) and previous uterine curettage (54.5%).

Only 3 cases presented with ante-partum haemorrhage. No antenatal diagnosis was achieved in any of these cases as all were diagnosed at surgery or manual removal. The total estimated blood loss for all the 11 cases was 24.5 litres giving a median blood loss of 2 litres. The total units of blood transfused were 46 units with a median of 4 units.

Eight (72.7%) cases had abdominal hysterectomy while 3(27.3%) were managed conservatively by uterine packing, over-sewing and blunt curettage of the placental site respectively.

There was one maternal death (9%) from the hysterectomy group due to disseminated intravascular coagulopathy. There were 3 (27%) perinatal deaths, two of which were due to prematurity.

The complications observed among the cases included haemorrhage (91%) (necessitating transfusion), loss of the uterus (73%), anaemia (36%), sepsis (18%), cardiac arrest(9%) and disseminated intravascular coagulopathy(9%). The mean duration of Hospital stay was 8.9 days (range, 7-14 days).

TABLE 1: Risk factors and complications of placenta accreta.

PARAMETER	NUMBER OF CASES	PERCENTAGE
RISK FACTORS		
Previous caesarean section	9	82
Placenta praevia	8	73
Previous uterine curettage	6	54.5
Age \geq 35	3	27

COMPLICATIONS

Haemorrhage	10	91
Loss of uterus	8	73
Post-operative anaemia	4	36
Sepsis	2	18
Cardiac arrest	1	9
Disseminated intravascular coagulopathy	1	9
Maternal mortality	1	9

DISCUSSION

The incidence of placenta accreta of 1 in 282 deliveries (0.35%) observed in this study is higher than the 0.01% and 0.19% reported from Kuwait and Chicago respectively.¹⁻² It is however comparable to the 0.3% reported from Taiwan and lower than the 0.9% reported from Israel^{10,15}.

The relatively high placenta accreta rate observed in our study may be related to our high caesarean section rate, our relatively small total number of deliveries and to the fact that our hospital is a referral center for complicated cases in our catchment area. Moreover our combination of clinical criteria and histology in the definition of placenta accreta might have contributed to our high incidence. It has been observed that studies that base their definition strictly on the histological criteria tend to report a lower incidence^{11,15}.

Although the histological method is said to be the classic and more objective method, its limitations are illustrated from the fact that its accuracy depends on the number of tissue blocks examined and that mild cases diagnosed histologically may be clinically unnoticed (incidental findings). Moreover the increasing use of conservative management further makes the incidence harder to define, as no histology is available. It has therefore been suggested that strict histological criteria with total disregard of clinical criteria may not be appropriate.^{1,11,15} In addition, since placenta accreta is a clinical obstetric emergency and its management is based on clinical diagnosis, clinical criteria for its definition should not be ignored^{11,15}.

The high rate of accreta associated with previous caesarean section and placenta praevia as observed in this study has been widely reported by others.^{1-4,6-11}

That no antenatal diagnosis was achieved in our series illustrates the observation that antenatal diagnosis of placenta accreta is difficult^{3-4,16}.

In a large Israeli series antenatal diagnosis was achieved only in 8 out of 310 cases even with a combination of ultrasonography and magnetic resonance imaging¹⁵.

In some series however, antenatal diagnosis has been made possible with the aid of ultrasonography, color Doppler and magnetic resonance imaging, with the attendant advantages of accurate planning/preparation for labour, multidisciplinary input and early referral to centres with the capacity to deal with the condition.^{3-4,6,17-18} In settings where these diagnostic tools are not available, cases of placenta praevia in women with one or more previous caesarean section should be managed as placenta accreta until proven otherwise⁶.

Antenatal diagnosis and a high index of suspicion are therefore required to reduce the maternal morbidity and mortality associated with this condition.

The transfusion of 46 units of blood for 10 women in our series classically illustrates the high demand this condition may have on the meager health resources of developing countries where homologous blood is usually not available due to difficulties in recruiting and screening donors and in the collection/storage of donor blood¹⁹⁻²⁰.

The observation in our series that majority (72%) of cases were managed by abdominal hysterectomy is in agreement with the findings of others.²¹⁻²³ Some studies have also shown that placenta accreta has become one of the leading indications for emergency peripartum hysterectomy.²⁴⁻²⁸ This treatment modality has been reported to give a much lower maternal mortality rate³⁻⁵.

Conservative treatment has the advantage of preserving future fertility and menstrual function but it is only possible in the presence of stable haemodynamic conditions and adequate technical support.²⁹⁻³⁴ This treatment modality should be considered whenever feasible in environments such as ours where there is a strong desire for large family size and aversion to hysterectomy.³⁵⁻³⁶

The complication observed in this series have been reported by others.^{2,26}

There is need for a larger study, which in addition to confirming or disproving the above findings will seek to

determine the trend of placenta accreta in conjunction with caesarean section rate in our environment.

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