EMERGENCY OBSTETRIC REFERRALS AT A UNIVERSITY TEACHING HOSPITAL, NIGERIA

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ABSTRACT

Objective: **To identify factors in our unbooked obstetric emergency cases that contribute to the increase in maternal mortality.**

Design: **A retrospective study.**

Setting: **Maternity Ward, University of Nigeria Teaching Hospital, Enugu, Nigeria, between January 1966 and December 1999.**

Subjects: **Four hundred and thirty five cases of emergency obstetric referrals treated during the review period.**

Results: **The incidence of unbooked obstetric emergencies is 9.5% and the high risk obstetric group, the primigravida and grand multiparous women constituted 63% of it. Majority (80%) of the patients belonged to the lower socio-economic class and prolonged and obstructed labour were the commonest mode of presentation. Sources of referrals were hospital/clinics (46%), maternity homes (23%), traditional birth attendants (TBAs)(16%) and prayer houses (2.3%). There were obvious delays at the referral sources and most of the patients presented in poor clinical states. Forty per cent of total maternal mortality in the hospital were attributed to unbooked cases with haemorrhage and sepsis being the major causes. Also perinatal mortality of 40.2% was recorded.**

Conclusion: **Lack of basic education and poverty are the major identifiable risk factors. Improving health care facilities, female education, regular training courses for medical personnel and elimination of quacks are advocated.**

INTRODUCTION

Part of the global strategies towards reduction of maternal mortality in developing countries include providing back up pre-natal care and support at the first referral level (primary health centre) for pregnant women. This is because pre-natal care has been shown to improve the perinatal and maternal outcome(1).

Nigeria has a high maternal mortality rate and unbooked cases are the major contributor(2). Paucity of facilities for handling obstetric emergencies contribute in no small measure to this high rate. Also high fee charged in hospitals, poverty, ignorance, negative cultural belief made utilisation of such facilities provided in hospital a last resort. Such scenario provide favourable climate for quacks.

This review was undertaken at University of Nigeria Teaching Hospital (UNTH) to identify factors in our emergency obstetric care which led to this very high maternal mortality rate in our referred cases and ways to ameliorate it. UNTH is located in Enugu, the capital of Enugu State in the eastern region of Nigeria and has a population of about two million people. It serves as a tertiary centre for the state and adjoining states in the region and also functions as a general hospital for the city and its environs.

MATERIALS AND METHODS

The hospital numbers of unbooked mothers who were managed between January 1996 and December 1999 were collected from the labour, antenatal, isolation and lying in wards of the hospital and their case notes retrieved from the medical record department. The total number of deliveries and maternal deaths over the same period was noted. The reproductive characteristics of the mothers as well as sources and indications for referral were recorded. Also the mode of delivery, perinatal and maternal complications were extracted from the case notes.

The term "unbooked" patients refers to patients who received antenatal care elsewhere or none at all, but who were transferred to our hospital as emergencies. This included patients admitted during the puerperal period. All pregnancies less than 28 weeks gestation (abortions) were excluded from the study.

The collected data were subsequently analysed. Chi square test was used to compare the perinatal mortality in booked and "unbooked" patients using Epi Info version 6 computer software. A P value of 0.05 or less was considered statistically significant.

RESULTS

During the study period, there were 435 cases of emergency obstetric referrals, out of 4604 total deliveries, giving an incidence of 9.5%. The age range of the patients was 15-44 years. Most of the patients (56.6%) were between 25 and 34 years of age (Table 1).

One hundred and thirty four patients (30.8%) were primigravidae while one hundred and forty (32.2%) were grandmultipara. One hundred and sixty one of them (37%) were in the parity group 1-4 (Table 2).

Table 1

Age distribution

Age (years)	No.	%
15-19	26	5.9
20-24	88	20.2
25-29	145	33.3
30-34	101	23.3
35-39	60	13.8
40-44	15	3.5

Table 2

Parity distribution

Parity	No.	%
0	134	30.8
1-2	85	19.5
3-4	76	17.5
≥5	140	32.3

Table 3 shows the distribution of the patients according to socio-economic class based on Tuckett's classification(3). Eighty per cent of the patients belong to social class IV and V.

Table 3

Socioeconomic class distribution

Socio economic class	Job description of husband	No.	%
I	Professionals e.g. doctors, lawyers, business directors	–	–
Ii	Other professionals, e.g. teachers	25	5.7
III	Skilled non-manual, e.g. secretarial staff Skilled manual, e.g. electricians	60	13.8
IV	Semi-skilled, e.g. machine operators	100	23
V	Unskilled labourers	250	57.5

Sources and indications for referrals are outlined in Tables 4 and 5. Majority (69%) of the referrals were from hospitals and maternity homes. Sixteen per cent of referrals were from TBAs. Prolonged and obstructed labour were the commonest indications for referral.

Table 4

Sources of referral

	No.	%
Hospital/clinics	200	46
Midwife maternity home	100	23
TBAs	70	16.1
Prayer houses	10	2.3
Not specified	55	12.6

Table 5

Indications for referral

	No.	%
Prolonged labour	150	34.5
Obstructed labour	100	23
Antepartum haemorrhage	9	2.1
Pre-eclampsia/eclampsia	10	2.3
Retained second twin	2	0.5
Post partum haemorrhage	40	9.2
Ruptured uterus	4	0.9
Not specified	120	27.6

One hundred and sixty-three (37.5%) of the patients were delivered by Caesarean section. Also laparotomy for ruptured uterus was done in six per cent of the patients. Other modes of delivery were shown in Table 6.

Anaemia and sepsis were the major causes of morbidity occurring in one hundred and twenty (27.6%) and ninety three (21.3%) of the patients respectively. There were twenty six maternal deaths and haemorrhage was a major contributor (Table 7). The total number of maternal deaths during the period under review was sixty five with the unbooked patients constituting 40%.

Table 6

Mode of delivery

	No.	%
Caesarean section	163	37.5
Spontaneous vertex delivery	209	48
Assisted breech delivery	23	5.3
Forceps/vacuum extractor	10	2.3
Destructive operation	4	0.9
Laparotomy	26	6.0

Table 7

Maternal complications

	No.	%
Eclampsia	11	2.5
Genital sepsis	68	15.6
Urinary tract infection	20	4.6
Septicaemia	25	5.7
Vesico vaginal fistula	4	0.9
Anaemia	120	27.5
Maternal death	26	6.0

Table 8

Perinatal outcome

	Unbooked	Booked
Fresh still birth	64 (14.7%)	90 (2.2%)
Macerated still birth	86 (19.8%)	171 (4.1%)
First week neonatal death	25 (5.7%)	140 (3.4%)_
Total perinatal death	175 (40.2%)	401 (9.6%)
Perinatal survival	260 (59.8%)	3768 (90.4%)
Grand total	435	4169
Perinatal death significant	$\chi2=551.3$	p<0.0001

Table 8 shows the perinatal outcome. The perinatal outcome was noted to be better in booked than unbooked patients (p<0.0001).

DISCUSSION

The incidence of unbooked obstetric emergencies excluding abortions was 9.5%. The high risk obstetric group, the primigravida and grand multiparous women constituted 63% of the unbooked emergencies.

Prolonged and obstructed labour accounted for 57% of the referred cases and this has also been noted as a common feature of unbooked patients by others(4). Invariably these women have visited some medical and non-medical personnel as shown in Table 4 and their management has been interfered with such that a very high number (69%) of them presented in poor clinical states. It is not unusual for these cases to present after more than 24 hours in labour because of poor transportation services and delay at the referral source.

It is estimated that in Nigeria over 80% of all deliveries are performed by traditional birth attendants (TBAs). This is because in some rural communities they are the only health personnel available. These TBAs who are largely illiterates have severe limitations in knowledge of modern science and medical skill and are usually at a loss when women under their care develop major complications during pregnancy and labour. The issue of re-training TBAs is still controversial(6). However the weight of opinion is that such an option is retrogressive and waste of scarce resources(7,8). Ignorance and poverty may have led to some cases who go for faith healing in prayer houses. Many of these cases are physically abused in the process of "casting out demons"

Eighty per cent of these patients who are largely poor and uneducated were in social class IV and V(3). At the University of Ibadan, Nigeria, a method of social classification(9) which is essentially similar to that of Tuckett(3) was developed and is widely in use in Nigeria. The importance of education in improving the social status of these patients is well known as formal education has been noted as the most consistent factor associated with the acceptance of antenatal care no matter the religious belief, ethnic group, place of residence, age and parity(10).

The consequences of late referral of patients were glaring as shown in Tables 7 and 8. Sepsis, obstructed labour and its sequelae, anaemia from haemorrhage and high Caesarean section rate were common features. Forty

per cent of the total maternal mortality in the hospital occurred in unbooked cases and late presentation has been shown as a predisposing factor(11). Haemorrhage and sepsis were the major causes of death and these findings agreed with reports of other workers from Nigeria(2,11). The resources of our blood bank have recently been markedly depleted as most blood donors are scared of undergoing HIV screening test before blood donation. The cost of antibiotics is also prohibitive for these very poor patients limiting its availability for their use. The overall perinatal mortality of 40.2% recorded is very high when compared with 9.6% among booked patients within the same period. The prevailing conditions seen in these referred cases such as severe hypoxia, sepsis and haemorrhage are well known predisposing factors for high perinatal mortality(12).

In Nigeria and other developing countries, a lot of work needed to be done in the primary health care setting especially in maternal and child health(13). The following measures are advocated to improve the situation: improvement of emergency obstetric health care facilities and other infrastructure at the primary health care level such as blood transfusion facilities, transportation, provision of water and agricultural products; universal basic education especially for women; adequate monitoring of health workers at the primary health care level by doctors at secondary and tertiary institutions; regular training and retraining courses for general medical practitioners and midwives on management of common obstetric emergencies and the need for timely referral and; greater effort to eliminate quackery.

It is envisaged that proper articulation and execution of the listed measures is bound to drastically reduce the high maternal and perinatal mortality rate seen in our society.

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