ORIGINAL ARTICLE

Obstetric Indices at The Ebonyi State University Teaching Hospital, Abakaliki, South East Nigeria

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Abstract

Background: *Some vital health statistics are usually necessary in planning and execution of certain health policies and programmes. This is especially important in an obstetric unit where reduction of maternal and perinatal mortality have become yardstick for achieving some aspects of the Millennium Development Goal. Nigeria.*

Method: *A review of Obstetric records in the Department of Obstetrics and Gynaecology, EBSUTH, Abakaliki, over a three-year period (January 2001-December 2003 was done.*

Results: *A total 1660 deliveries were conducted during the review period. Of these, 82.2% were registered for antenatal care. Caesarean section rate was, 17.8%, instrumental deliveries 2.1% while 0.5% had destructive operations.. Teenage pregnancy and grandmultiparity accounted for 6.0% and 15% respectively. Sixteen. Percent of the babies were of low birth weight while 4.5% were macrosomic. Maternal mortality ratio and perinatal mortally rate were 3,392 per 100,000 and 86.3 per 1,000 respectively.*

Conclusion: *Some of the vital obstetric indices were still within the range comparable to other centers. Grandmultiparity contributed a significant proportion of the cases and this calls for aggressive family planning campaigns. Maternal and perinatal mortality rates were outrageous. It is suggested that periodic review of some vital obstetric indices will pinpoint priority areas and help health policy makers and implementers provide the basic rudiments of safe motherhood initiative to our women.*

Key words: *Obstetric indices, tertiary health institution, Abakaliki, Nigeria.*

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Introduction

Some vital health statistics are very important in the formulation or planning and execution of certain health policies and Programmes. It also helps policy makers to know where to place emphasis on health issues or where to channel more resources on Programme implementation. This is especially important in an obstetric unit where reduction of maternal and perinatal mortality have become yardstick for achieving some aspects of the Millennium Development Goals.

Nigeria is the most populous country in Africa, yet her reproductive health indices rank among the poorest in the world. Since the launching of the Safe Motherhood Initiative (SMI), Nigeria, in September 1990, overwhelming evidence suggests a trend towards the increasing rates of maternal mortality. It has been shown that maternal morbidity and mortality are high in some obstetric conditions such as grandmultiparity, elderly primigravida, teenage pregnancy and in patients who did not register for antenatal care (Unbooked cases) [1-3]. These conditions also affect the mode of delivery and often associated with adverse fetal outcome [24]. Some of these important obstetric parameters such as maternal mortality rate, caesarean section rate and other modes of delivery, fetomaternal outcome, and perinatal deaths, among others will be reviewed.

This study therefore looks at some of these vital obstetric indices as they obtained in the obstetric unit of the Ebonyi State University Teaching Hospital, Abakaliki, Nigeria.

Materials and Method

A review of obstetric records in the Department of Obstetrics and Gynaecology of EBSUTH, Abakaliki, over a three-year period (January 2001-December 2003) was done. Ebonyi State University Teaching Hospital Abakaliki is located in Ebonyi State, Southeast Nigeria. It is a tertiary health institution owned and run by the state government but also serves some part of adjoining Cross River and Benue states. It caters for all categories of obstetric population but the clients are essentially people for the surrounding rural areas and few urban inhabitants. They are essentially farmers, housewives, artisans and few civil servants. The obstetric unit is not selective in patients' care and management. Thus, it caters for both those that registered formally for antenatal care (booked) and

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those that did not register (unbooked). The unit conducts an average of 500-600 deliveries per year. Postmortem examinations for maternal and perinatal deaths are not routine but done only with the consent of the relatives. Cases files of all deliveries conducted within the period under review were retrieved from the medical records department, operating theatre, labour ward and special care babies unit (SCBU). Relevant data such as, age, parity, booking status, mode of delivery, estimated postpartum blood loss and fetomaternal outcome were extracted. Also retrieved were the sex, weight and Apgar score of the babies. The data were analysed by simple percentages.

Results

Over a three-year period (January 2001-December, 2003), a total of 1660 deliveries were conducted. Of these, 1365 (82.2%) were booked while 295 (17.8%) were unbooked (Table 1). Majority of the women (99.7%) were within the reproductive age group (15-49years) However, 6.0% were teenage pregnancies. There was no record of delivery at 50 years and above(Table 1). Table 1 also shows distribution of the woman according to parity. Two hundred and eighty two (29.0%) were primiparae, 549 (56.4%) multiparae and 142 (14.6%) grandmultiparae respectively.

Table 2 shows the mode of deliveries. Normal deliveries accounted for 1203 (72.5%) while Caesarean sections contributed 295 (17.8%). Vacuum and breech deliveries contributed 118 (7.1%) and 35 (2.1%) respectively while destructive operation accounted for 9 (0.5%). There was no forceps delivery during the period.

The mean estimated postpartum blood loss was 290ml. However, 6.6% of the parturient had postpartum haemorrhage by conventional definition of loss of more than 500 mls of blood.

Twenty-four cases were twin pregnancies, giving a multiple pregnancy rate of 1.4%.
Male to female ratio of the babies was 1:1.1.

Mean birth weight for males was 3.0kg and 2.9kg for females. 271 (16.2%) were low birth weight babies while 76 (4.5%) were macrosomic .Among the babies, 171 (10.2%) suffered severe asphyxia while 250 (14.8%) had mild to moderate asphyxia(Table 3).

Maternal and perinatal mortality were 3392/100,000 live births and 86.3/1000 total births respectively.

Table I: Delivery trend, Booking status, Age and Parity distribution of paturients

Variables	2001	2002	2003	Total
Yearly delivery	352	621	687	1660 (100%)
Booking status				
Booked	276	526		
Unbooked	76		563	1365(82.2%)
		95	124	295(17.8%)
Age (yrs)				
≤19	17	34	49	100(6.0%)
20-29	223	400	422	1045(63.0%)
30-39	110	179	202	491 (29.6%)
≥40	2	8	14	24(1.4%)
		164	177	459(27.7%)
				934(56.3%)
Parity				
Para 1	118			
Para 2-4	189			
		360	385	
Para 5 and above	45	97	125	267(16.0%)

Table II: Mode of Deliveries

Year	Normal Delivery	C/S	Breech	Vacuum	Destructive Operation
2001	242	79	6	23	2
2002	464	90	17	46	4
2003	497	126	12	49	3
Total	1203 (72.5%)	295 (17.8%)	35 (2.1%)	118 (7.1%)	9 (0.5%)

C/S – Caesarean section.

Table III Birth weight and Apgar Score of babies

Variable	N0	Percentage (%)
Birth weight (kg)		
< 2.5kg	271	16.1
2.5-3.95kg	1337	79.4
≥ 4kg	76	4.5
Apgar Score (1st minute)		
0-3	171	10.2%
4-6	250	14.8%
7-10	1192	70.8%
Not indicated	71	4.2%
Total	* 1684	100.0

* There were 24 cases of multiple pregnancies.
Low birth weight babies (<2.5kg) – 271 (16.1%)
Macrosomic babies (≥ 4kg) 76 (4.5%).

Discussion

The yearly delivery showed an increasing trend. This is not surprising as the hospital was becoming popular over the years, having been in existence as a teaching hospital in 1999. Unbooked cases made significant contribution to the total deliveries over the period. It has been shown that maternal morbidity and mortality occur mostly in unbooked parturients. In Zaria, Nigeria, the maternal mortality rate was 130/100,000 in women who had antenatal care and 2860/100,000 in women who did not have any form of antenatal care[4]. Antenatal care and hospital delivery should be seen as an essential component in the fight against maternal mortality and morbidity and provision of such services free of charge will go along way in making our women present themselves for care.

The caesarean section rate of 17.8% in this study is lower than 27% in Enugu, Nigeria[5] but compares favourably with figures from other centres[6]. Education of

the women on the need for early booking, regular antenatal clinic attendance and hospital delivery have been highlighted as important ways of reducing caesarean section rate [5,6].

Breech delivery accounted for 2.1% of all deliveries, lower than 3.0% by Emembolu et al [7] in Zaria, Nigeria. Though vaginal breech delivery is associated with adverse perinatal outcome when compared to normal delivery and caesarean section [4,7], breech presentation should not been seen as an indication for caesarean section. It has been shown that in carefully selected cases, even primigravidae with breech presentation will deliver vaginally [8,9].

Vacuum was the only type of instrumental delivery over the period, accounting for 7.1%. This is much higher than 0.5-2.5% of total deliveries from other centres in Nigeria [10-12]. There was no record of forceps delivery whereas it contributed 0.3%[11] and 1.57%[13] of total deliveries from two institutions in Nigeria. In the UK, hospital figures for instrumental vaginal deliveries ranged from 4-26%[14-15]. This higher rate in hospitals from developed countries may be partly attributed to the routine use of intrapartum epidural analgesia and cardiotocography. Also, survey in the UK and USA suggest that vacuum is becoming more popular, thus confirming a shift away from forceps to vacuum [16]. Obstetricians should however be competent and confident in the use of both the forceps and vacuum extractor to assist vaginal delivery. Proper training of obstetricians in their use is seriously advocated, especially the art of forceps delivery that seems to be going into extinction.

Teenage pregnancy and delivery accounted for 6.0% or 60/1000 total deliveries, higher than 1.9% or 19/000 deliveries from another study [17]. Teenage pregnancy is a high-risk pregnancy associated with complications arising from adverse physiological, anatomical and socioeconomic factors. Several studies have demonstrated an increase in complications associated with teenage pregnancy and childbirth, which include anaemia, preterm labour, hypertensive disorders of pregnancy, low birth weight, cephalopelvic disproportion, operative deliveries and poor perinatal/neonatal outcome [17-20]. Proper family life education at school and out of school, and provision of contraceptive services for a considerable proportion of adolescents who are sexually active will help reduce the incidence of teenage pregnancy. For those who are pregnant, they should be encouraged to avail themselves of the available antenatal services.

Grandmultiparity constitutes a high-risk pregnancy because of the numerous complications associated with it especially in developing countries where there are still deficient standard for appropriate care. Despite this, it still constitutes a significant proportion of our obstetric population. It contributed 15% of all deliveries over the period, similar to 16% in Enugu, Nigeria [21]. Education, economic empowerment, improvement in the social status of women and pervasive family planning campaign will reduce the incidence of gradmultiparity and the complications associated with it.

Twenty five percent of the babies had an Apgar score of 0-6. The use of Apgar score in predicting the well being of newborn babies cannot be over emphasized. However, arbitrary and wanton award of Apgar score has been demonstrated in a study that revealed high level of inaccurate use of the score among labour ward personnel, with a high interobserver and subspecialty variation in assigning the score [22]. An unrelenting training of users is necessary for the correct use of the Apgar score.

The perinatal mortality of 86/1000 is higher than the national average of 48/1000[23] and 77/1000 total deliveries by Kuti et al [24]. Generally, these are high compared to other regions of the world .Majority of the deaths are due to intrapartum complications. Thus, efforts at reducing perinatal death rates should be directed towards improving intrapartum care and upgrading our neonatal care facilities.

The maternal mortality ratio of 3392/100,000 is staggering and outrageous. It appears similar to figures from other zones in Nigeria[25]. These are unacceptably high even by African standard. It is important to emphasize the strategic role of accessible and affordable antenatal care, service free delivery, pervasive family planning information and services and overall improvement in the socio-economic status of our women in maternal mortality reduction.

Finally, it is suggested that periodic review of some of the vital obstetric indices will expose and pinpoint priority areas, and help health policy makers and implementers improve the seemingly deplorable reproductive health indices and provide the basic rudiments of the safe motherhood initiative to our women.

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