MATERNAL MORBIDITY AFTER CHILDBIRTH IN A HEALTH CARE FACILITY IN SOUTH - SOUTH NIGERIA

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ABSTRACT

Background: Maternal morbidity though a global public health problem had not been a major
Subject of emphasis like maternal mortality. And yet for each woman that dies sixteen others
Suffer various forms of morbidity.

Objective: This study was design to determine the incidence, types and determinants of maternal morbidity after childbirth in a health care facility in south-south Nigeria.

Methodology: This study was a retrospective review of delivery records of women who were treated at the maternity unit of the Holy Family Hospital, Ikom, Cross-Rivers State, Nigeria from January 2004 to December 2010.

Results: Among the 3,068 deliveries, 124(4.04%) women suffered various morbidities. Most (31.5%) were aged 26 to 30 years. Sixty seven (54.0%) had at least secondary level of education. About 38.0% had no occupation. Unbooked (53.2%) and Para 3 to 4 (54.0%) were in the majority. The leading morbidities were; postpartum heamorrhage (33.9%), retained placenta (25.0%), hypertensive disorders (14.5%) and genital sepsis (13.7%). Educated women were more likely to book for antenatal care (p=0.000) and to deliver in orthodox health facility (p=0.007).The morbidities were significantly related to the level of skill of the birth attendants (p=0.001) and place of delivery (P=0.045). Majority (85.5%) of the patients were treated as in-patients for a week.

Conclusion: The incidence of maternal morbidity was high with postpartum haemorrhage, retained placenta, hypertensive disorders and genital sepsis as the leading morbidities. Sustaining the campaign for women education, utilization of reproductive health services, promoting the employment of skilled birth attendants and hospital delivery is recommended.

Keywords: Maternal morbidity, postpartum haemorrhage, puerperal sepsis, hypertension, childbirth.

INTRODUCTION

Global efforts to reducing maternal mortality especially in developing countries received a tremendous boast after the international conference on safe motherhood in Nairobi Kenya in 1987 [1]. Interventions involved each level of health care delivery with particular emphasis on antenatal care. Despite improvement in uptake of antenatal care, maternal health indices are still poor in developing countries [1].

Out of the 585,000 women who die each year during childbirth, over 98% are from the developing world[2, 3, 4]. Maternal morbidity which refers to complications that arise during the pregnancy, labour ,delivery or postpartum period though not uncommon, has not been the subject of emphasis by medical experts particularly in developing countries of the world [1,5]. And yet for each woman that dies, 16 others suffer different forms of morbidity [1,6].

In developing countries, pregnancy and complications from childbirth account for 18% of diseases among women [5]. About 40% of pregnant Nigerian women are said to experience pregnancy related health problems during or after pregnancy and childbirth with 15% estimated as suffering serious long term complications [7].In regions of the world where maternal mortality ratios are low, severe acute maternal morbidity (SAMM) also known as "near miss" which refers to a very ill pregnant or recently delivered woman who would

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have died had not been that luck and good care was on her side is increasingly becoming important [7,8,9].
Despite the controversy surrounding the definition of SAMM which has to do with either usage of disease specific criteria or organ dysfunction requiring intensive care unit (ICU), the fact remains that maternal morbidity occur much more frequently than maternal deaths. Therefore medical experts can not continue to ignore the subject of maternal morbidity. In view of the scarcity of data on the extent of this public health problem in developing countries, this study was design to review the incidence, types and determinants of maternal morbidity after childbirth in a secondary health care facility in southern Nigeria.

SUBJECTS & METHOD

STUDY AREA

The study was done at the Holy Family Hospital, Ikom, Cross- River State, Nigeria. This 256 bedded health care facility that provide health care delivery services in the central senatorial district of the state as well as neighboring Cameroon's was built and inaugurated in 1956 by Bishop Thomas Megettrik [10].
Although initially managed by the Irish reverend sisters, from 1985 to 2000 it became jointly managed with the State government. The catholic Diocese of Ogoja became the sole manager of the health facility in 2001 when government returned the health institutions in the state that were co-managed by her to their original owners. The hospital has the second comprehensive antiretroviral therapy (ART) care support in the state for HIV/AIDS intervention programs [10].
The maternity unit has a 40 bedded unit manned by medical officers, nurse/midwives, CHEWs, mission trained auxiliary staff and recently resident doctors in Obstetrics and Gynaecology from the Jos University Teaching Hospital. The antenatal clinic which holds twice weekly attends to approximately 25 clients per booking visit. The hospital is equipped with an ultrasound machine, basic laboratory facilities and a functional operating theatre. Approximately 500 deliveries are recorded annually. Patients are sometimes referred from the primary health care facilities, maternity homes and occasionally from the numerous private hospitals to the health facility for treatment.

STUDY DESIGN

This was a retrospective analysis of medical records of patients who were treated at the hospital from January 2004 to December 2010.

METHODOLOGY

Patients who where treated at the the health facility for one form of post delivery complication or the other were included in the study. Data was extracted from the delivery and admission register at the maternity unit. And where necessary, the general out-patient records were accessed. The Hospital management gave ethical clearance for the study to be done.

DATA ANALYSIS

Data collected include; initials, hospital numbers, age, occupation, religion, educational status, booking status, parity, mode of delivery, morbidity and duration of hospital stay. Data was analyzed using EPI INFO 3.2.2 (CDC Atlanta, Georgia USA) and presented as simple percentages in a tabular format. Chi-square was used as a test of statistics with p-value of ≤ 0.05 at 95% confidence interval considered statistically significant.

RESULTS

A total of 3,068 deliveries occurred within the 7 year under review. Out of these number, 124 (4.04%) suffered various forms of morbidities. Most (31.5%) of the women were aged 26 to 30 years. Most (49.2%) of them had secondary level of education. Housewives constituted 37.9%, Farmers 29.0%, Students 12.9%, Traders 11.3% and Civil Servants 8.9%. Majority (53.2%) were unbooked for antenatal care. Para 3-4 constituted 54.0%, 1-2 (28.3%) and primi-parous (17.7%).Hospital deliveries were 61.3%, Home deliveries 25.0% and others 13.7%. Most (83.9%) had spontaneous vaginal delivery, 4.0% assisted vaginal breech delivery, 4.0% destructive operations, 3.2% vacuum extraction and 1.6% laparatomy. Nurses/Midwives were responsible for 50.8% of the deliveries, TBA 22.6%, CHEWs 14.5%, M/O 12.1%. The leading morbidities were PPH (33.9%), retained placenta (25.0%), Hypertensive disorders (14.5%) and genital sepsis (13.7%). Women with formal education were more likely to book for antenatal care (p=0.000) and to deliver in orthodox health facility (p=0.007).The morbidities were significantly related to the level of skill of the birth attendants (0.001) and place of delivery (0.045). Majority (85.5%) of the patients were managed as in-patient for a week.

DISCUSSION

The incidence of maternal morbidity after child birth in the study was 4.04%. This is higher than the reported 0.38% in Scotland, but lower than the 6.45% in Niger Republic and 7.5% in Senegal[11-12]. This variation is a reflection of the differences in quality as well as utilization of reproductive health services in the developed and developing countries.

Women who suffered morbidities were aged 26 to 30 years, multiparous and with low level of education. These were similar to findings of other studies[13]. More than half of the women were un-booked for antenatal care. Studies have shown that the absence of good antenatal care and hospital delivery usually leads to a high incidence of maternal morbidity and mortality [3, 14]. The booking status of patients and place of delivery was significantly related to their level of education. Sustaining the campaign for women education and economic empowerment will promote utilization of reproductive health services including delivery in orthodox health facilities.

Leading maternal morbidities following child birth were; Post-partum haemorrhage, retained placenta, hypertensive disorders and genital sepsis. This is similar to findings of other studies [11, 15, 16]. This is not surprising bearing in mind that these are the leading causes of maternal deaths worldwide [9].

The rate of occurrence of retained placenta in the study is extremely higher than the findings in a study done at Ibadan, South western Nigeria, where the incidence was 1.74% in unscarred uterus and 5.3% in scared uterus [17]. This could have been as a result of poor management of the third stage of labour which is possibly a reflection of the low level of knowledge of some of the accouchers about this concept. Placenta retention is a known cause of post-partum heamorrhage [18].

The incidence of genital sepsis was higher than the reported 1.7% in Ife, Nigeria[19]. Although, the study at Ife was done at a tertiary health facility. Supervised delivery where appropriate antibiotic usage is achieved should be encouraged to prevent or reduce this serious morbidity that has the potential of affecting the women's reproductive career.

The incidence of wound infection following caesarean section which was 1.6% is lower than the reported 6.7% and 12.5% at two tertiary health facilities in Nigeria [20, 21]. It is possible that the higher number of surgical operations done at this referral centres could have accounted for this variation. Post partum psychosis is said to typically occur around the time of delivery and affects less than 1% of women [22, 23]. The incidence in the study was however 1.6%. Episiotomy breakdown rate was 4.8%. The restrictive rather than routine use of this obstetric procedure will help in reducing the incidence of complications associated with it [24-27].

The significant relationship between maternal morbidity after childbirth, and accoucher observed in the study calls for intensive efforts in training and retraining of birth attendants. The employment of qualified medical personnel in public hospitals at all levels of health care delivery should be pursued with vigour.The midwifery service scheme (MSS) of the Federal Ministry of Health (FMOH) in Nigeria to provide skilled birth attendants at the grassroots should be given the desired speedy attention. It has been shown that midwives in health facilities appear to detect more obstetric complications than TBAs. Immediate detection leads to immediate Care and low fatality rates [1, 28].

Barriers to the utilization of antenatal and obstetric services which could involve, ill-literacy, low socio-economic status, culture and wrong perception of their health by women in our environment should be adequately tackled by all stake holders in the health sector [29,30]. This measure will discourage the attitude of women who book for antenatal care and yet prefer to deliver outside orthodox facilities [2].It is also worthy to mention that, health problems after childbirth should be anticipated and careful attention should be given to prevent them from occurring or reducing the severity of morbidity [31].

Table I: Socio-demographic characteristics of women with morbidities

Age Group	Frequency(N)	%(100)
=15	2	1.6
16-20	21	16.9
21-25	35	28.2
26-30	39	31.5
31-35	21	16.9
36-40	6	4.8
Educational Level		
None	25	20.2
Primary	23	18.5
Secondary	61	49.2
Post-Secondary	15	12.1
Occupation		
Civil Servant	11	8.9
Trading	14	11.3
Schooling	16	12.9
Farming	36	29.0
Housewives	47	37.9

Table II: Frequency of Obstetric variables

Booking Status	N=124	%(100)
Unbooked	66	53.2
Booked	58	46.8
Parity		
0	22	17.7
1-2	35	28.2
3-4	67	54.0
Mode of delivery		
Laparatory	2	1.6
Caesarean delivery	4	3.2
Destructive delivery	5	4.0
Vaginal breech	5	4.0
SVD	104	83.9
Accoucher		
Medical Officer	15	12.1
CHEW	18	14.5
TBA	28	22.6
NO/MW	63	50.8
Place of delivery		
Hospital	76	61.3
Home	31	25.0
Others	17	13.7
Duration on admission		
<1	7	5.6
1-7	106	85.5
8-14	11	8.9

Key: CHEW Community Health Extension Worker, TBA, Traditional Birth Attendant, NO/MW, Nursing Officer/Midwife, SVD, Spontaneous Vaginal Delivery.

Table III: Types of Morbidity

Morbidity Type	N=124	%(100)
Episiotomy	6	4.8
Genital Sepsis	17	13.7
Genital Tear	1	0.8
Heamorrhage	42	33.9
Hypertensive disorders	18	14.5
Mastitis	5	4.0
Psychosis	2	1.6
Retained Placenta	31	25.0
Wound Infection	2	1.6

Table IV: Relationship between place of delivery, accoucher and morbidity

Place of delivery	*Episiotomy (%)*	*Genital Sepsis (%)*	*Genital Tear (%)*	*PPH (%)*	*HTN (%)*	*Mastitis (%)*	*Psychosis (%)*	*Retained Placenta (%)*	*Wound infection (%)*	***Total (%)***	***Statistics***
Home	-	*5(16.2)*	-	*9(29.0)*	*5(16.1)*	-	*1(3.2)*	*11(35.5)*	-	*31(100)*	X^2
Hospital	*6(7.9)*	*9(11.8)*	*1(1.3)*	*30(39.5)*	*13(17.1)*	*4(5.3)*	-	*11(14.5)*	*2(2.6)*	*76(100)*	*26.68*
Others	-	*3(17.6)*	-	*3(17.6)*	-	*1(5.9)*	*1(5.9)*	*9(52.9)*	-	*17(100)*	*P=0.045*
Total	*6(4.8)*	*17(13.7)*	*1(0.8)*	*42(33.9)*	*18(14.5)*	*5(4.0)*	*2(1.6)*	*31(25.0)*	*2(1.6)*	*14(100)*	
Accoucher											
CHEW	-	*3(17.6)*	-	*3(7.1)*	-	*1(20.0)*	-	*11(35.5)*	-	*18(14.5)*	X^2
M/O	*1(16.7)*	*1(5.9)*	-	*10(23.8)*	*1(5.6)*	-	-	-	*2((100)*	*15(12.1)*	*57.36*
NO/MW	*5(83.3)*	*8(47.1)*	*1(100)*	*20(47.6)*	*14(77.8)*	*4(80.0)*	-	*11(35.5)*	-	*63(50.8)*	*P=0.001*
TBA	-	*5(29.4)*	-	*9(21.4)*	*3(16.7)*	-	*2(100)*	*9(29.0)*	-	*28(22.6)*	
Total	*6(100)*	*17(100)*	*1(100)*	*42(100)*	*18(100)*	*5(100)*	*2(100)*	*31(100)*	*2(100)*	*124(100)*	

Key*: PPH, post partum heamorrhage, HTN, Hypertension, CHEW, Community health extension workers, M/O, medical officers, TBA, Traditional Birth Attendant, NO/MW, Nursing Officer/Midwife.*

Table V: Relationship between booking status, place of delivery and educational level

	Booking Status				Place of delivery				
Educational Level	**Booked (%)**	**Unbooked (%)**	**Total (%)**	**Statistics**	**Home (%)**	**Hospital (%)**	**Others (%)**	**Total (%)**	**Statistics**
None	4(16.0)	21(84.0)	25(100)	X^2=31.11	7(28.0)	10(40.0)	8(32.0)	25(100)	X^2=17.70
Primary	5(21.7)	18(78.3)	23(100)	P=0.000	9(37.1)	12(52.2)	2(8.7)	23(100)	P=0.007
secondary	35(57.4)	26(42.6)	61(100)		14(23.0)	40(65.6)	7(11.5)	61(100)	
Post-Secondary	14(93.3)	1(6.7)	15(100)		1(6.7)	14(93.3)	–	15(100)	
Total	58(46.8)	66(53.2)	124(100)		31(25.0)	76(61.3)	17(13.7)	124(100)	

CONCLUSION

The incidence of maternal morbidity after childbirth observed in this study is high. The leading morbidities were haemorrhage, retained placenta, hypertensive disorders and genital sepsis. Sustained campaigns towards promoting women education, economic empowerment, and utilization of reproductive health services offered by skilled birth attendants will reduce the incidence of morbidities especially in developing countries.

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