

A 5 YEAR REVIEW OF THE PREVALENCE AND FETO-MATERNAL OUTCOME OF ECLAMPSIA AT AMINU KANO TEACHING HOSPITAL.

Abdullahi HM^a, Aliyu LD^b Zakari M^a, Lawal U^a.

Department of Obstetrics & Gynaecology Bayero University Kano Nigeria^a.

Department of Obstetrics & Gynaecology, Abubakar Tafawa Balewa University Teaching Hospital Bauchi Nigeria^b.

ABSTRACT

Background: Eclampsia remains a serious obstetric disorder in tropical obstetric practice. Provision of quality antenatal care is essential in reducing its incidence.

Objective: To determine the prevalence and socio demographic characteristics of patients with eclampsia and also the feto-maternal outcome.

Study Design: A 5-year retrospective study on eclampsia in Aminu Kano Teaching Hospital, Kano.

Results: There were a total of 13,750 deliveries and 240 eclamptic patients during the study period, giving a prevalence of 1.75%. About 49.28% of the eclamptic patients were adolescents compared with 7.25% in the control group and 59.42% of them were primigravidas compared with 12.56% in the control group. About 91.30% of the cases were Hausas and 77.77% were from Kano metropolis. Also 82.9% of the cases were unbooked and 51.29% of them were delivered via caesarean section compared with 10.63% in the control group. Maternal mortality occurred in 12.08% of the cases compared with 0.97% in the control group. Perinatal mortality occurred in 22.71% of the cases compared with 3.86% in the control group.

Conclusion: Eclampsia is one of the serious emergencies seen in Sub-Saharan Africa and is associated with increased perinatal morbidities and mortalities. Providing good quality antenatal care coupled with improving emergency capability of hospitals and establishing an intensive care unit for the care of eclamptic patients are essential in reducing maternal and perinatal morbidities and mortalities from the disease.

Keywords: Eclampsia, Feto-maternal outcome, AKTH Kano.

INTRODUCTION

Eclampsia is one of the serious obstetric emergencies seen in our sub-region. It is defined as the occurrence of convulsions or fits in a woman with signs and symptoms of pre-eclampsia in the absence of underlying neurologic disease¹⁻³. It often presents with few warning signs, and might occur in a patient with previously mild disease, thus predicting its timing is difficult⁴.

The incidence of eclampsia varies from one part of the world to another. The incidence is low in the western countries where there is excellent

Corresponding Author: *Dr Hauwa Musa Abdullahi.*

Department of Obstetrics & Gynaecology Bayero University Kano.

Email: drhauwa@yahoo.com

antenatal care^{1,3}. The incidence however remains high in the developing countries like Nigeria, because of poor antenatal care attendance especially in the rural areas³. An incidence of 0.42% was reported from Ahmadu Bello University Zaria⁵, 1.32% from Benin City⁶ and 1.66% from Lagos University Teaching Hospital⁷. Studies carried out at University College Hospital-Ibadan and Zaria show that the incidence is higher among primigravidae and young women less than 25 years of age^{5,8}. It is a leading cause of maternal mortality in Kano (46.3%)⁹. It was also found to be among the main causes of maternal mortality in Sokoto and Jos^{10,11}.

A good understanding of eclampsia is important in the communities of Northern Nigeria because of the incessant practices of early marriage and teenage pregnancy, socio-cultural and religious barrier which prevent women from attending antenatal clinics coupled with scarcity of antenatal facilities and inadequate manpower for those that attend antenatal clinics and deliver in hospital. The aims of the study are to determine the prevalence of eclampsia, the socio demographic characteristics of affected patients and to determine the fetomaternal outcome of patients managed with eclampsia at Aminu Kano Teaching Hospital Kano.

MATERIALS AND METHODS

A 5 year retrospective study on eclampsia at Aminu Kano Teaching Hospital was undertaken from 1st January 2007 to 31st December 2011. Labour ward records was used to extract file number of patients with eclampsia and their case notes were retrieved from the medical records department of the hospital. Information on maternal age, parity, booking status, diagnosis, mode of delivery, Apgar score,

complications, maternal and fetal outcome were collected for analysis. The next patient after each eclamptic patient was used as a control. The data retrieved was entered into a personal computer and analyzed using Minitab.

RESULTS

A total of 13,750 deliveries were recorded between 1st of January 2007 to 31st of December 2011, among which 240 patients were found to have eclampsia. The prevalence of eclampsia was therefore estimated at 1.75%. Out of the 240 folders of the eclamptic patients, only 207 folders were retrieved (retrieval rate of 86.25%). The analysis is therefore solely based on the number of the folders retrieved.

About half (49.28%) eclamptic patients were found to be adolescents (11 – 19years) compared with 15 (7.25%) in the control group. as shown in table 1. The parity distribution (Table 1) shows a preponderance of primigravida's among the eclamptic patients 123 (59.42%) compared with 26 (12.56%) in the control group.

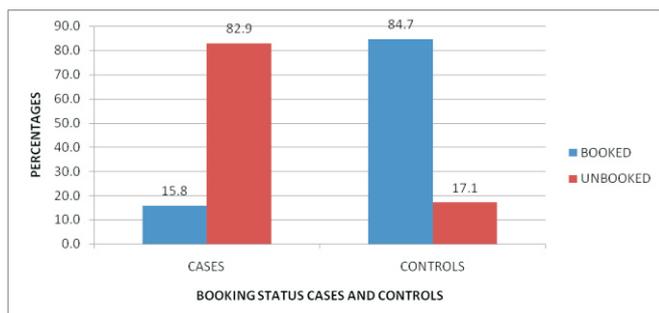
Table 1: Parity

Parity	Cases		Controls	
	No.	%	No.	%
0	123	59.42	26	12.56
1-4	67	32.37	144	67.57
5 and above	17	8.21	37	17.87
Total	207	100	207	100

$$X^2 = 98.655, DF = 2, P = 0.001$$

About 91.30% of the cases were Hausas and 77.77% were from Kano metropolis. Majority (82.90%) of the eclamptic patients were unbooked compared with 17.1% in the control group (Figure I).

Figure 1: Booking Status



The commonest mode of presentation is antepartum eclampsia in 93 (44.93%) of cases, followed by intrapartum eclampsia in 66 (31.88%) and then postpartum eclampsia in 48 (23.19%) of cases. About half (51.69%) of the eclamptic patients were delivered via caesarean section compared with 10.63% (22) in the control group. 12.56% (26) of the eclamptic patients were delivered with forceps. None of the patients in the control group had forceps delivery. Among the eclamptics 16.43% (34) had a vacuum delivery compared with 1.93% (4) in the control group. About 181 (87.44%) had a normal delivery in the control group compared with only 38 (18.36%) of eclamptic patients.

Table 2: Mode of delivery

Mode of Delivery	Cases		Controls	
	No.	%	No.	%
Caesarean section	107	51.29	22	10.63
Forceps	26	12.56	-	-
SVD	38	18.36	181	87.44
Vacuum	34	16.43	4	1.93
Not delivered	2	0.97	-	-
Total	207	100	207	100

Maternal mortality occurred in 12.08% (25) of eclamptic patients compared with 0.97% (2) in the control group. The causes of maternal death

were aspiration (5.80% of cases), acute renal failure (2.42%), disseminated intravascular coagulopathy (2.42%) and abruptio placentae in 0.48% of cases. Disseminated intravascular coagulopathy resulted in the death of 0.48% (1) and postpartum haemorrhage in 0.48% (1) patients in the control group.

About 93% of the babies were delivered with birth weight less than 2.5kg compared with 2 (0.97%) in the control group. Perinatal mortality occurred in 22.71 of the eclamptic patients compared with 3.86% in the control group.

Table 4: Perinatal Outcome

Outcome	Perinatal Outcome			
	Cases		Control	
	No.	(%)	No.	(%)
ALIVE	160	77.29	199	96.14
Early NND	13	6.28	2	0.97
IUFD	34	16.43	6	2.90
Total	207	100	207	100

$\chi^2 = 32.093$ DF = 3 P-value = 0.001

DISCUSSION

The prevalence of eclampsia in this study was found to be 1.75% which is similar to the value of 1.66% reported from Lagos⁷. It is, however lower than the value of 4.4% and 2.52% reported from Sokoto and Benin^{10,6}, but higher than the value reported from Kaduna (0.42%)⁵. This low prevalence may be because the study was carried out at a tertiary centre where antenatal care attendance and quality of care provided is optimal. The incidence of eclampsia was found to be increasing in Northern part of Nigeria^{9,10}.

Eclampsia was found to be higher amongst the adolescents (49.28%) compared with (7.25%) in the control. It was also higher among primigravidas. About 84.95% of the patients were unbooked compared with 17.34% in the control ($p < 0.001$). This was related to poor utilisation of available maternity care services coupled with low socio-economic status of women, inadequately staffed health facilities and unfriendly attitude of health care providers¹². These findings are similar to the those found at The University College Hospital, Ibadan⁸.

About 44.93% of patients were diagnosed to have antepartum eclampsia which was lower than the 85% recorded at University College Hospital, Ibadan and 61.6% recorded in Ethiopia^{8,13}.

The gestational age at which eclampsia occurred was not ascertained in this study because the patients were unconscious and as such information on their gestational age was difficult to obtain. About 51.69% of cases were delivered via caesarean section which is similar to the values recorded from Ibadan and Ethiopia^{8,13}. This is because majority of the patients presented with antepartum eclampsia and unfavourable cervix. Misoprostol can be used for inducing antepartum eclamptic patients especially with in the event of delay before caesarean section¹⁴.

Maternal mortality in this study was 12.08% among the cases compared with 0.97% in the control group (p value – 0.001). This is similar to the value of 9% reported from Ibadan⁸. This shows that the chances of survival is higher in the control group than the study group (OR = 0.07; 95%, CI 0.01; 0.31).

Common causes of maternal death in this study were aspiration in 5.80% of cases, acute renal

failure in 2.42% of cases. Disseminated intravascular coagulopathy occurred in 2.42% of cases and abruption placentae in 0.48% of cases. Similar findings were reported from Ibadan, Lagos and Sokoto^{8,7,10}. Causes of maternal death in the control group were post partum haemorrhage in 0.48% and disseminated intravascular coagulopathy in another 0.48%. Other Authors reported liver haematoma and a hepatic rupture in HELLP syndrome as a cause of death among the eclamptics^{15,16}.

About 44.93% of the babies delivered by eclamptic patients have low birth weight (<2.5kg) compared with 0.97% in the control group. Perinatal mortality occurred in 22.71% of cases compared with 3.86% in the control group ($\chi^2 = 31.89$, $p = 0.001$). This clearly shows that perinatal mortality is higher among the eclamptics compared to the control cases (OR = 0.4; 95% CI= 0.06 – 0.31). The perinatal mortality in this study is higher than the value of 10% reported from Ibadan⁸, but lower than the value of 40.9% reported from Kaduna⁵.

Eclampsia remains a serious obstetric disorder in tropical obstetric practice. Provision of good Quality Antenatal Care, improving the emergency capability of hospitals and the establishment of intensive care units for the care of eclamptic patients are essential in reducing the incidence of eclampsia.

CONCLUSION

Eclampsia is one of the serious emergencies seen in Sub-Saharan Africa and is associated with increased perinatal morbidities and mortalities. Providing good quality antenatal care coupled with improving emergency capability of hospitals and establishing an intensive care unit for the care of eclamptic patients are essential in reducing maternal and

perinatal morbidities and mortalities from the disease.

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