

Pattern of Clinical Presentation of Eclampsia at Nnamdi Azikiwe University Teaching Hospital, Nnewi, Southeastern Nigeria

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ABSTRACT

BACKGROUND: Eclampsia contributes significantly to maternal and perinatal mortalities globally. The objective of this study is to review the pattern of Eclampsia in Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi, Nigeria.

METHOD: A retrospective study that reviewed records from labour ward and the Medical Records Department, of cases of Eclampsia managed at NAUTH over a ten year period 1st January-31st December, 2009.

RESULTS: There were 57 cases of Eclampsia out of a total of 6,262 deliveries within the study period, giving a prevalence of 0.91%. The highest prevalence of 0.24% occurred in 2009. It was most common, 14 (30.4%), in the 25-29 years age group. The nulliparous women, 28 (61%) were more commonly affected. The prevalence was higher in the un-booked patients (89%), and antepartum Eclampsia was the commonest type (76%). Twenty one (45.7%) patients had three or more convulsions prior to the institution of therapy. Headache, oedema, and blurring of vision were the commonest symptoms, 74%, 71%, and 65% respectively.

CONCLUSION: Eclampsia occurred mainly in un-booked and primigravid patients in this study.

Early registration of pregnant women, especially primigravid, in health facilities for effective antenatal care and supervised hospital delivery will significantly reduce the prevalence and complications of Eclampsia.

KEY WORDS: Characteristics, Eclampsia, Tertiary institution, Southeastern Nigeria

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INTRODUCTION

Globally, Eclampsia remains one of the major causes of maternal and perinatal morbidities and mortalities.^{1,2} It is an unpredictable, multi-organ disorder unique to human pregnancy and is defined as the occurrence of generalized convulsions not due to epilepsy or other convulsive disorders, and associated with signs of pre-eclampsia during pregnancy, labour, or within seven days of delivery.³ The condition is almost invariably preceded by preeclampsia which is defined as hypertension of at least 140/90mmHg recorded on two separate occasions at least four hours apart and in the presence of at least 300mg protein in a 24 hour collection of urine, arising de novo after the 20th week of gestation in a previously normotensive woman and resolving completely by the

sixth week post partum.⁴ When a woman experiences convulsive attacks or fits in addition, she is said to suffer from eclampsia.

Eclampsia can occur antepartum, intrapartum, and postpartum. Generally, Eclampsia is relatively rare in the UK, occurring in approximately 1:2000 pregnancies. This is in contradistinction to Nigeria where the prevalence is 11.8 per 1000 deliveries and even higher in rural maternity homes and hospitals in Nigeria.^{4, 5} The aetiology of pre-eclampsia/Eclampsia is generally unknown. The condition has been described as a disease of theories. However, the concept of generalized maternal endothelial cell dysfunction as a primary part of the pathogenesis is widely accepted as central to other theories.^{6,7} Treatment of Eclampsia involves the delivery of the foetus after aborting the fits and stabilizing the patient.

In spite of the plethora of studies on pre-eclampsia and Eclampsia in Nigeria, of which the literature is replete with,^{8, 9, 10, 11, 12} the condition remains a leading direct obstetric cause of maternal mortality in Nigeria accounting for 11% of overall maternal deaths.¹³ Undoubtedly, geographical and regional variations in characteristics of eclamptics may have an influence on the outcome of Eclampsia.

This study reviews the prevalence of Eclampsia as well as the pattern of clinical presentation of eclamptic patients in Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi, southeastern Nigeria. The information obtained will serve as a guide towards suggesting strategies for improvement in the prevention and management of preeclampsia and eclampsia.

SUBJECTS AND METHODS

A retrospective study involving the review of case records of Eclamptic patients managed at Nnamdi Azikiwe University Teaching Hospital, Nnewi, Nigeria, over a ten year period, between 1st January 2000 and 31st December 2009. The records of patients who were treated for eclampsia were retrieved from the medical records unit of the hospital after collecting their folder numbers from the labour ward register. Data collected include age and parity of the patient, antenatal booking status, gestational age, blood pressure on presentation, number of convulsions before therapy was instituted amongst other symptoms and signs, and the clinical types of Eclampsia.

The inclusion criteria were patients who had registered for antenatal care at NAUTH and referred patients, with generalized tonic-clonic seizures during pregnancy, labour or puerperium and background features of pre-eclampsia, after excluding other neurological causes of seizures. Data were analyzed using statistical package for social scientists (SPSS), for window version 16. The variables were analyzed using simple percentages. The results are presented in Figure and Tables.

RESULTS

During the 10-year study period, there were a total of 6,262 deliveries in the hospital, out of which 57 cases were complicated with Eclampsia, giving a prevalence rate of 0.91 %. Forty six case folders of the 57 Eclamptic patients were retrieved and analyzed.

Figure 1: Distribution by yearly trends of Eclampsia over the study period.

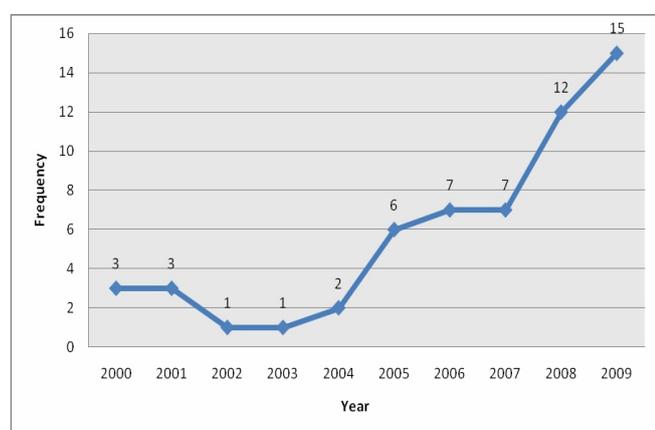


Figure 1 shows the distribution by yearly trends of Eclampsia over the study period. Between 2002 and 2009, there was a steady rise in the number of cases of Eclampsia. The rise was from one to 15 cases. Table 1 shows the distribution by age, parity, and antenatal booking status of the patients. Majority of the women affected are within the age range of 25-29 years, 14 (30.4 %), followed by the 35-39 year age range, 11 (24.0 %). Majority of the patients were nulliparous, 28 (60.9 %); and un-booked, 41 (89.0 %).

Table 1: Distribution by age, parity, and antenatal booking status of the patients

Characteristic	No	%
AGE (Years)		
<20	2	(4.4)
20 - 24	10	(21.7)
25 - 29	14	(30.4)
30 - 34	6	(13.0)
35 - 39	11	(24.0)
>40	3	(6.5)
PARITY		
0	28	(60.9)
1	5	(10.8)
2	7	(15.2)
3	1	(2.2)
4	1	(2.2)
e5	4	(8.7)
ANTENATAL BOOKING STATUS		
Booked	5	(11.0)
Un-booked	41	(89.0)

The distribution by clinical type of Eclampsia and number of convulsions before institution of therapy is shown in Table II. Antepartum Eclampsia was commonest, occurring in 35 (76.1 %) cases. There were 7 (15.2 %) of Intrapartum and 4 (8.7 %) of postpartum Eclampsia. The number of convulsions occurring before the commencement of therapy was predominantly three and above, occurring in as high as 21 (45.7 %) cases. Two convulsions occurred in 9 (19.6 %) and one convulsion occurred in 16 (34.7 %) cases.

Table II: Distribution by clinical type of Eclampsia and number of convulsions before institution of therapy

Clinical type of Eclampsia	Number of convulsions before therapy			Total	%
	1	2	3 and above		
Antepartum	12	8	15	35	76.1
Intrapartum	2	1	4	7	15.2
Postpartum	2	-	2	4	8.7
Total	16	9	21	46	
Percentage	34.7	19.6	45.7		100

Table III: Distribution by clinical presentation of patients with Eclampsia

CLINICAL PRESENTATION	No	%
Headache	34	(74)
Oedema	33	(71)
Severe Hypertension (Diastolic Blood Pressure above 110mmHg)	32	(69)
Blurring of Vision	30	(65)
Unconsciousness	12	(26)

Table III shows the distribution by clinical presentation of patients with Eclampsia. Most of the patients presented with headache, 34 (74 %), followed by oedema, 33 (71 %), and severe hypertension, 32 (69 %). Twelve (26 %) patients were unconscious at the time of presentation, while 30 (65 %) had blurring of vision.

All the cases of Eclampsia occurred in the last trimester above 26 weeks of gestation.

DISCUSSION

The prevalence rate of eclampsia of 0.91% observed in this study is similar to that reported in Ile Ife in southwestern Nigeria.¹¹ This rate is however much lower than 1.7% reported from Sagamu also in southwestern Nigeria.¹⁰ An earlier review from this centre reported a lower prevalence rate of eclampsia of 0.75%¹⁴ while yet a much lower rate of 0.29%⁹ had been reported from

Enugu in southeastern Nigeria, the same geopolitical zone as the study centre. Very high prevalence rate, 31.3% has been reported from the northern part of Nigeria.¹⁵ Clearly therefore, prevalence rate of eclampsia has not demonstrated any regular trend between the various regions of Nigeria, although most of these studies are tertiary hospital based studies. This perhaps may have accounted for the very high prevalence rates of eclampsia in Nigeria compared to that reported in developed countries where rates as low as 0.005% have been reported.^{4,5}

The yearly trend in the prevalence of eclampsia is noteworthy, increasing steadily from one in 2002 to as high as 15 cases in 2009. The reason for this steady increase is not clear. It is possible that an increasingly more enlightened population has recognized the need and benefits of referring such patients to specialized centres. In the past, eclampsia had been regarded amongst some rural un-enlightened communities as being caused by witchcraft, insanity, and possession by demons, and as such, pregnant women with eclampsia were taken to prayer houses and were seldom taken to orthodox health facilities.¹⁶

The mean age of the patients in this study, 29.1±5 years, is higher than those 24.7, 24.0, and 23.5 years reported respectively from Enugu,⁹ Lagos,⁸ and previous review from Nnewi,¹⁴ and may mirror an increasing age at marriage in the society consequent upon the trend to acquire higher education amongst females in the study area. More relevant, however, to eclampsia is parity. As high as 60.9% of the patients in this study are nulliparous and this is in agreement with previous reports.^{8, 9, 10, 11} Majority of the patients, 89%, are un-booked and have been referred from peripheral health facilities both private and public, most of which worrisomely, lack the capacity to handle many life threatening obstetric emergencies, eclampsia inclusive.

The commonest clinical type of eclampsia encountered in this review is antepartum eclampsia accounting for 76.1%. This is not surprising for a developing country like Nigeria where health seeking behavior is poor, and antenatal care and delivery in health facilities have been reported to be as low as 58% and 35% respectively.¹⁷ Antepartum eclampsia is prone to high morbidity and mortality since such patients tend to be taken to various un-orthodox centres and given various forms of un-orthodox treatment thereby arriving late to orthodox health facilities. In contrast to the situation in developing countries, developed countries have more of intrapartum and postpartum eclampsia since good antenatal care coverage prohibits the development of antepartum eclampsia. Intrapartum eclampsia occurring in good health facilities is likely to be better managed with less morbidity and mortality. The most common clinical

presentations encountered in this review include headache, oedema, hypertension, and blurring of vision.

The characteristics of eclampsia and the profile of eclamptic patients in this study indicate an obvious defect in the scope and quality of obstetrics care in Nigeria. Most of the eclampsia occurred antepartum and in patients designated as un-booked. No doubt some of these patients may have been booked in health facilities that lack the capacity for emergency obstetrics care. There is need to reduce the prevalence rate of eclampsia which is known to contribute immensely to maternal mortality. Health education and public enlightenment as to the need to good antenatal care should be given to all and sundry men and women alike at every given opportunity. Early booking for antenatal care helps in the early detection of preeclampsia and therefore an early intervention process. In particular, every primigravida should be encouraged to register for antenatal care as early in pregnancy as possible since the disease is more prevalent amongst this group of pregnant women.

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