



Medico-Social Characteristics of Patients with eclampsia in a metropolitan hospital in North western Nigeria: Is there a changing pattern?

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Abstract

Background: Eclampsia is a recognized cause of maternal and neonatal morbidity and mortality in North western Nigeria. It's a preventable obstetrics calamity were adequate antenatal care services are provided.

Objective: To review medico-social characteristics of patients with eclampsia at a metropolitan Specialist Hospital in North-western Nigeria,

Methodology: Eighty consecutive patients that presented with eclampsia at Murtala Mohammed Specialist Hospital were recruited for the study from 1st December, 2016 to 28th February, 2017. Data were collected using structured questionnaire, administered by research assistants. Information obtained included sociodemographic data, duration of fits before presentation and maternal-fetal outcome.

Results: A total of 1931 patients delivered within the study period, among them 80 had eclampsia. This gives an incidence of 4.0%. Teenage pregnancy accounted for 35%. Forty-nine patients (61.2%) were primigravidae and up to 95% were booked. Majority of the patients 40(50%) had antepartum eclampsia while only 10(12.5%) had postpartum eclampsia. Most of the patients (73.8%) presented within 12 hours of convulsions and (87%) had vaginal delivery. There were 3 maternal deaths with case fatality rate of 3.8%. Live birth was achieved in 65%. Fresh still birth and Macerated still births were recorded in 20% and 12.5% respectively.

Conclusion: The incidence of eclampsia is still high despite introduction of free maternity care services. Socio medical factors and poor quality of Antenatal Care services may be the contributing factors to development of eclampsia. There is need to review and improve the quality of antenatal care services offered at the primary health care centers.

Key words: Eclampsia, social, antenatal care

Introduction

Eclampsia is a disease that continues to be of significant concern, and is defined as new onset of grand mal seizure activity and/or unexplained coma during pregnancy or postpartum in a woman with signs or symptoms of preeclampsia.¹ It is a major contributor to maternal and perinatal morbidity and

mortality worldwide and in developing countries like Nigeria where presentation is usually late and facilities for resuscitation are scarce.^{2,3} It contributed up to 31.3%, in a population based survey of maternal mortality, by Adamu et al⁴ and also 46% of maternal death in Kano according to Society of Obstetricians and Gynaecologists Of Nigeria (SOGON) NEEDS assessment survey in 2004.⁵ Eclampsia is commonest among unbooked, primigravidas and women of extreme of reproductive age.⁶ Thus identification of patients with pre-eclampsia during ANC (Antenatal Care) is the most important tool in the prevention of

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eclampsia.

Symptoms of eclampsia have been described since the time of Hippocrates. Varandeous coined the term eclampsia in 1619.⁷ The two cardinal features of the disease: hypertension and proteinuria, were noted in mid to late 19th century (hypertension) and the early 20th century (proteinuria).⁸ Delivery was further identified as the key feature of management in the 20th century. Notwithstanding the extensive literature and progress in our understanding, these facts still remain the basis of our management of preeclampsia and eclampsia.⁹ It is a multi-systemic disease and has been found occasionally to occur in the absence of hypertension or proteinuria which are the cardinal features of pre-eclampsia.¹⁰

The staggering figure of maternal mortality reported in 2004 by Society of Gynaecologists and Obstetricians of Nigeria moved the Kano state government to initiate programs that will reduce maternal mortality in the state. Among these programs were expanding the ongoing free maternity services to include free Magnesium Sulphate for eclamptic patients and intensive manpower recruitment posted to man strategic hospitals in the state in order to reduce the delays in reaching the Specialist Hospital. At the time of writing this article, we are not aware of any official assessment to look at the implementation and

outcome of such interventions. We wish to share our unusual findings of the medico-social characteristics of the patients studied so as to give a guide in controlling this menace.

Methodology: This is a prospective cross sectional study, in which eighty consecutive eclamptic patients that presented to MMSH were recruited for the study from 1st December 2016 to 28th February, 2017. Ethical clearance for the study was obtained from the state hospital management board. Data were collected using structured questionnaire, administered by research assistants. Information obtained included sociodemographic variables, duration of fits before presentation and maternal-fetal outcome. The results were expressed in frequencies and percentages and summarized using mean and standard deviation.

Results

A total of 1931 patients delivered within the study period, among them 80 had eclampsia. The incidence of eclampsia from this study is 4.0%. The age of the patients ranges from 16-49 years with a mean age of 23 and SD of 7.4 years. Teenage pregnancy accounted for 35%. Primigravidas accounted for 49% while 17.9% were grand-multiparae. Up to 45% had secondary school

Table 1: Age and parity of the eclamptic patients

Variable	Frequency	Percentage
Age (years)		
10-14	0	0
15-19	28	35.0
20-24	30	37.5
25-29	10	12.5
30-34	3	3.8
35-39	3	3.8
40+	6	7.5
Parity		
0	49	61.2
1	6	7.5
2	6	7.5
3	3	3.8
4	2	2.5
5+	14	17.5

Table 2: Educational attainment of the eclamptic patients

Education	Frequency	Percentage
Quranic	27	33.8
Primary	15	18.7
Secondary	36	45.0
Tertiary	2	2.5
Total	80	100

Figure 1: Booking status of the eclamptic patients

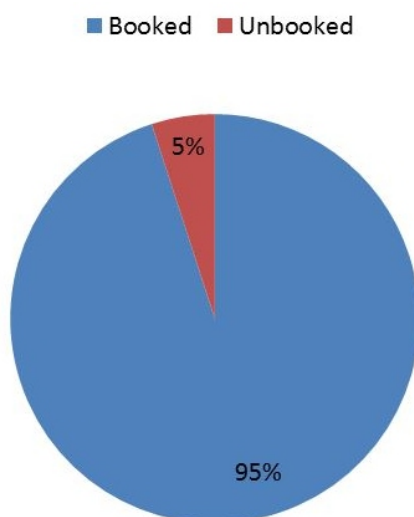


Figure 2: Distribution of types of eclampsia among the eclamptic patients

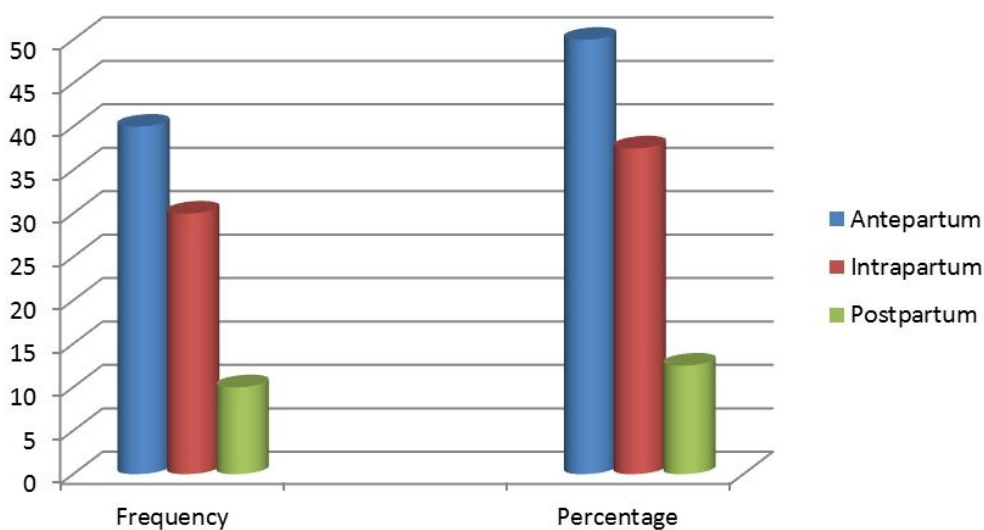
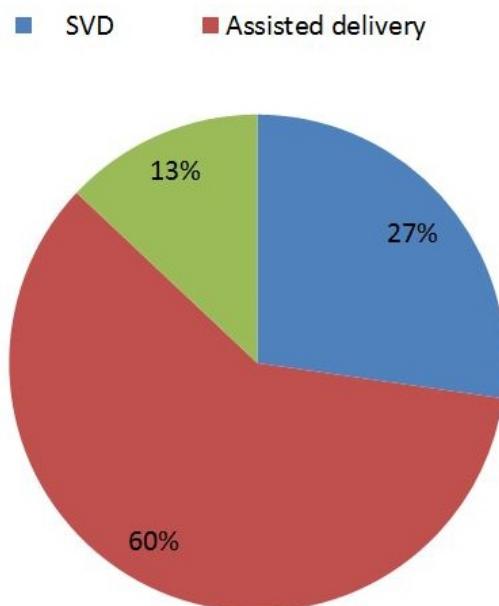


Figure 3: Mode of delivery of the eclamptic patients



education and 95% were booked. Majority of the cases (55.8%) had antepartum eclampsia, 35.4% had intrapartum eclampsia while only 8.8% had postpartum eclampsia. Most of the patients (73.8%) presented within 12 hours of convulsions, while 13(16.2%) presented after 24 hours. Only 5 (6.25%) had twins. Majority (87%) had vaginal delivery while 13% had Caesarean section. Up to 60% were induced using Misoprostol while 27% had spontaneous vaginal delivery (SVD). There were three maternal deaths with case fatality rate of 3.8%. Live birth was achieved in 65%. Fresh still birth and Macerated still births were recorded in 20% and 12.5% respectively.

Discussion

Eclampsia is one of the most dangerous conditions in which those caring for pregnant woman and her fetus must deal with especially since its onset can be dramatic, abrupt and in many women without any warning.¹¹

The incidence of 4% is similar to the finding at the same hospital 6 years earlier.¹² This suggest that there is no significant decrease in the incidence of eclampsia despite the state government efforts towards curtailing maternal mortality program. The

incident is lower than that obtain in a rural tertiary hospital of 9%¹³ in the same geographical region. There is no significant change in the pattern of age and parity distribution. The finding of almost 50% of the patients with at least secondary education and 95% of the eclamptic patients have booked for ANC are figures that are much higher than previously reported.¹² However, most of these patients had their antenatal care at primary health centers. It is common knowledge that most of these centers lack basic facilities such as sphygmomanometer for measuring blood pressure making it easy for preeclampsia to go undetected¹⁴. Antepartum eclampsia was the commonest type of eclampsia identified in this study. Several Nigerian studies have reported similar findings.^{12,15,16} Akinola et al¹⁷ however reported intrapartum eclampsia to be the predominant type of eclampsia among their patients. Delay in presentation (more than 24 hours following onset of convulsions) was observed in 16% of the patients in this study. This is higher than the 8.2% reported by Yakasai et al¹², but lower than the 56% observed by Tukur et al.¹⁸ Only 13% of the patients in this study required caesarean section. This figure is much lower than the rates reported in many Nigerian studies.^{12,15,17,18}

Most of the patients in this study were induced with Misoprostol while awaiting surgery many of whom progressed satisfactorily leading to spontaneous vaginal delivery. Those that were fully dilated at presentation had the third stage of labour shortened using either forceps or vacuum (assisted delivery). These reasons may explain the lower caesarean section rate observed in this study. The case fatality rate of 3.8% found in this study is lower than the fatality rates observed by Yakasai et al,¹² Olatunji et al¹⁹ and Tukur et al¹⁸, among their patients. All the patients with eclampsia recruited for this study were given magnesium sulphate as part of their treatment. This may have contributed to the lower fatality rate demonstrated in this study. In addition, the sample size employed in this study is smaller than in the studies quoted.

Conclusion

The incidence of eclampsia is still high despite introduction of free maternity care services. Poor quality of ANC at primary health care centers may be the contributing factors to development of eclampsia. There is need to review and improve the quality of antenatal care services offered at the primary health care centers.

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