



## Full Length Research Article

# AN ASSESSMENT OF ECLAMPSIA MANAGEMENT IN TWO HEALTH INSTITUTIONS MAIDUGURI, BORNO STATE

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## ABSTRACT

This study compared the management of eclampsia in University of Maiduguri Teaching Hospital (UMTH) and State Specialist Hospital (SSH) Maiduguri respectively. The target populations were nurses and doctors working in the department of obstetrics and Gynecology in the two hospitals. An exploratory study design was adopted and convenience sampling method was used to select 100 nurses and doctors (50 from each hospital). A self- developed questionnaire was used for data collection which sought information on: biodata, facilities, management protocol, and factors militating against effective management of eclampsia. The findings shows that 70% of the respondents from the UMTH opined that there are adequate, facilities compared with 60% of respondents from SSH whose views were in the contrary. The majority (70%) of respondents in the UMTH used magnesium sulphate against 76% of respondents in SSH who used diazepam in the management of eclamptic fit. Study however, concluded that there is need for government to improve on hospital facilities at SSH for management of eclamptic patients.

## INTRODUCTION

Eclampsia was initially recognized centuries ago (Ancient Egypt) as seizures occurring uniquely in the context of pregnancy as the resolved with delivery (Aagaard and Kjersti (2005). WHO (2000) estimated that each year approximately half a million women die world wide of pregnancy and pregnancy related complication, out of these, 99 percent occur in developing countries with Africa and Asia accounting for 95 percent. Eclampsia is a state of coma associated with convulsion which usually occurs in late pregnancy, commonly preceded by pre-eclampsia (Chamberlain and Lewis 2006). It has now universally recognized that the most effective strategy for reducing the risk of death due to complications of pregnancy is to provide emergency obstetric care service within the reach of all pregnant women. Akinola and Fabamwo (2008) defined eclampsia as a seizure activity of coma unrelated to other cerebral conditions in an obstetrical patient with pre-eclampsia while majority of the cases present in the third trimester of pregnancy or within the first 48 hours following delivery, rare cases have been reported prior to 20 weeks of gestation or as late as 23 days of post-partum.

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Studies have shown genetic, immunologic, endocrinology, nutritional and- even infectious agents as the causes of pre-eclampsia and eclampsia. A common pathway thought to be associated with the development of pre-eclampsia/ eclampsia is uteroplacental/ischemia. It is postulated that utero-placenta ischemia predisposes to the productions and release of biochemical mediator that enter the maternal circulation, causing wide spread endothelial dysfunction and generalized arteriolar constriction and vasospasm (Adetoro *et al.*, 2006). Despite extensive research, no detractive cause have been identified, presumably the placenta and fetal membrane play a role in the development of pre-eclampsia because of the prompt resolution of the disease following delivery (Adeleye *et al.*, 2005)

## Statement of the Problem

Eclampsia has continued to be one of the leading causes of death in an obstetric patient. It is relatively uncommon in developed countries where it constitutes about 1 in every 2,000 deliveries (WHO, 2002). The prevalence of complications, maternal morbidity and mortality are due to eclampsia which is associated with poor antenatal care services, accessibility, poor facilities inappropriate management protocol and lack of follow-up among unbooked patients (El-Nafaty,

Massa and Melah, 2006). In Nigeria and other developing countries, eclampsia is a common complication of pregnancy as pre-eclampsia is still a major obstetric problem and one of the major causes of maternal and prenatal morbidity and mortality (WHO, 2000). Nigeria contributes 10% of maternal morbidity to the world prevalence as the incidence of maternal mortality due to eclampsia is high in the North East of Nigeria particularly in Maiduguri and its environs (DHS, 2003). Improving maternal health and decreasing maternal mortality have been key concerns of several international summits and conferences since the late 1980s. Just of recent, millennium development goals adopted at the millennium summit which aimed at improving maternal health services (MDG 5) by reducing maternal mortality ratio by three-quarter between 1990 and 2015. Based on the above prevailing maternal health problems, this study aimed at investigating into the management of eclampsia in two selected Hospitals in Borno State that is, State Specialist Hospital Maiduguri and University of Maiduguri Teaching Hospital. The study will also assess adequacy of facilities in the management of eclampsia, management protocols and factors militating against effective management of eclampsia in both hospitals. It is hope that the findings of this study will provide adequate knowledge on effective means to prevent and manage Eclampsia among pregnant women in order to avert complications. This study will also help the health personnel's to educate women during antenatal care visit and the management at all health levels to intensify efforts on provisions of obstetrics emergencies facilities.

**MATERIALS AND METHODS**

**Design**

An exploratory research design was used to assess various management of eclampsia in State Specialist Hospital and University of Maiduguri Teaching Hospital in Borno State respectively

**Setting**

The study was carried out at State Specialist Hospital and University of Maiduguri Teaching Hospital in Borno State respectively. The State Specialist Hospital built in the early 1960s started operation initially with six wards of twenty beds each. In the early and mid 70s, the hospital was expanded to a capacity of thirty beds per ward. Currently, the hospital has a total bed capacity of 460. The hospital is located in the heart of the Maiduguri along Shehu Laminu Way few kilometers from the general post office. It serves as a main service and referral hospital for Maiduguri Metropolis and of the entire Borno State. The University of Maiduguri Teaching Hospital is an ultra-modern five-star hospital owned by the Federal Government of Nigeria. It is one of the tertiary health institutions in the North-East of the country and was designated as a center of excellence in Immunology and infectious disease. University of Maiduguri Teaching Hospital has 23 wards and several units. UMTH is saddled with responsibilities of training, teaching and research.

**Population**

The target population for this study were nurses and doctors working in the department of Obstetrics and labour wards in both UMTH and SSH respectively.

**Sampling Technique**

A convenience sampling method was used to select 22 midwives, 17 nurses and 11 doctors from UMTH, while 26 midwives, 20 nurses, and 4 doctors were selected from obstetric and labour wards of State Specialist Hospital respectively.

**Instrument**

A self developed 20 questions items questionnaire was the instrument used for data collection in this study. The questionnaire has four (4) sections, which sought information as follows; Section A on Bio-data, Section B: on facilities, Section C on Management protocol while Section D was on factors militating against management of eclampsia in the two Hospitals. The instrument was checked for both content and face validity and a pre-test study was conducted at the Umar Shehu Ultra-modern Hospital Maiduguri for its reliability

**Data Analysis**

The data collected was analyzed using statistical table to determine the frequencies and percentages of variables, as the results were presented on tables.

**Ethical Consideration**

Permission was obtained from research and ethical committee of University of Maiduguri Teaching Hospital well as from the medical Director of State Specialist Hospital Maiduguri respectively. An informed consent was obtained from the respondents prior to data collection; participants were assured of confidentiality.

**RESULTS AND DISCUSSION**

The study was comparative study on the management of eclampsia in UMTH and SSH respectively. The composition of the study population were 20% nurses at the UMTH, followed by 58% midwives and 22% doctors, while at the SSH, the majority of the respondent, (60%) were midwives, followed by 32% nurses and 8% doctors. The result of the study revealed that there are adequate facilities for the management of the eclampsia in UMTH., Compared with those in SSH which are not adequate facilities for the management of eclampsia. This is in line with the hospital based protocols for developing countries such as overall incidence of eclampsia of 3.8%/1000 deliveries in Ilorin, Nigeria, 1.04/ 1000 in Nairobi, Kenya and

**Table 1. Demographic**

Demographic characteristic	UMTH		SSH	
	No	%	No	%
Age				
20 -29	11	22	8	16
30-39	14	28	22	44
40-49	20	40	13	26
50 and Above	5	10	7	14
Sex				
Male	15	30	12	24
Female	35	70	37	76
Educational status				
Professional	28	56	13	26
Degree	17	34	5	10
Others specify	5	10	28	56
Area of specialization				
Nurses/midwife	39	78	46	92
Doctors	11	22	4	8

Table 2. Management Strategies in the two hospitals

Management Strategies	UMTH		SSH	
Unit set aside for eclampsia	No	%	No	%
Yes	5	10	48	96
No	45	90	2	4
Adequate use of Oxygen				
Yes	38	76	20	40
No	12	24	30	60
Adequate use of suction machine				
Yes	30	60	16	32
No	20	40	34	68
Adequacy of facilities				
Adequate	35	70	20	40
Not Adequate	15	30	30	60
Adequate Manpower				
Yes	28	56	24	48
No	22	44	26	52
Management Protocol				
<i>Fluids use</i>	No	%	No	%
Dextrose saline	30	66	32	64
Normal saline	8	16	6	12
Ringers	3	6	4	8
Minitol	4	8	6	12
Other	5	8	6	12
Total				
<i>Drug used</i>				
Diazepam	8	16	38	9
Magnesium sulphate	35	70	3	6
Lytic cocktail	4	8	2	4
Nifedipine	9	6	5	10
Other	2	4	1	2
Total				
<i>Mode of Delivery</i>				
Forceps	2	4	4	8
Induction	4	8	25	50
SVD	3	6	6	12
C/S	40	80	13	26
Other	1	2	2	4
Total				

Table 3. Factors associated with pre-eclampsia / eclampsia

Militating factors	UMTH		SSH	
Early presentation	No	(%)	No	(%)
Yes	8	16	46	92
No	42	84	4	8
Antenatal clinic				
Yes	5	10	2	4
No	45	90	48	96
Social status				
Yes	46	92	40	80
No	4	8	10	20
Factors				
Associability	22	44	25	50
Affordability	16	32	13	26
Availability	12	24	12	24

1.2/1000 in Zambia (Adetoro *et al.*, 2005). It must be noted however, that adequate facilities play a major role in the prevention and management of eclampsia in health institutions. On the management strategies majority (70%) of the respondents the main remedy used in the management of eclampsia as against 76% of the respondent admitted that diazepam was the drug of choice in the management of eclampsia. Probably, this are the drugs availability, in the pharmacy sections and that are affordable and accessible to pregnant women in the hospitals, considering the two levels of health care. However, the use of magnesium sulphate in UMTH is in line with the current management protocol of eclampsia (Sibia *et al.*, 2004). It must be noted that Mgso4 is more effective in fit management in eclampsia compared to

diazepam. (Fabamwo *et al.*, 2007) opined that women administered with magnesium sulphate had a 52% lower incident of recurrent convulsion in eclampsia as compared to those given diazepam (13:2(60/435) versus 27.90 (120/425) women allocated to magnesium sulphate had 67% lower risk of recurrent seizures than those receiving phenytoin (5.7% (22/388) versus 17.19 (66/387). The result of this study also shows that the majority of patient in both Hospitals were unbooked with the rate in SSH higher. The findings of this study support findings by (Akinola *et al.*, 2003), in a study conducted at Olabisi University Teaching Hospital Sagamu Ogun State, showed that, there were 93 cases of eclampsia out of a total delivery of 5423 given an incidence of 1.7%. Almost all the patients, (96.8%) were un booked. This study also shows that

50% of the respondents at UMIH and 44% in SSH admitted that most of the patients with eclampsia have no access to antenatal care, which means that access to Ante natal care services among pregnant women poses a grate challenge to the health of both the mother and the unborn child in Maiduguri especially the mothers managed in these hospitals with eclampsia. This problem maybe due to the fact that most of the patient were ignorant of the disease and were residing in the rural area of low socio-economic states. This finding is supported by El-nafaty *et al.* (2006) who reported that the incidence of eclampsia rate is higher in developing countries (0.01%) vs 0.028%) and this variation depend on the level of awareness, poverty, availability and accessibility to health care facilities. The inconsistent reading of blood pressure has been noticed in this study as one of the factors militating against the management of eclampsia in both hospitals.

### Implication to Nurse and Nursing Practice

Eclampsia contribute greatly to the annual maternal morbidity and mortality among population. The crust of the condition remains that the successful management of eclampsia is the prevention of pre-eclampsia. Nurses who are the majority in the health setting are often the first contact in the health care services should be on the lookout for pregnant women who are more prone to pre-eclampsia in the community health facilities. Focused antenatal care should be given to those who are at risk and prompt management should be given to those who developed pre-eclampsia. Nurses should endeavor to prevent the advancement of pre-eclampsia to eclampsia. Although the prognosis of eclampsia is reported to be poor, its successful management depends on the nurses/midwives who are the majority among all health care providers. Nurses also need to have adequate knowledge of how to identify patient who are at risk during antenatal care. In addition to this, they should be able to know how to recognize promptly, some warning signs of pre-eclampsia such as, epigastric pain and headache, as these signs have a direct link with pre-eclampsia that may result to eclampsia. In conclusion, patient with eclampsia are at risk of maternal and prenatal morbidity and mortality. However, adequate and prompt identification of the risk factors and management will minimize the risk to both mother and fetus. Adequate prevention remains the most important factors in reducing morbidity and mortality from eclampsia, through regular attendant of mothers to antenatal clinics.

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