Nigerian Journal of Clinical Practice
June 2003, Vol. 6 (1);1– 4

TRENDS IN ECLAMPSIA AT KORLE BU TEACHING HOSPITAL, ACCRA GHANA.

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ABSTRACT

Objectives: The aim of the study was to find out the current trend of eclampsia and the incidence in Korle Bu Teaching Hospital

Method: Case files of all patients who were managed as eclampsia from 1st January 1998 to 31st December 2000 were reviewed.

Results: The incidence of eclampsia during the study period was 15.82 per 1000 deliveries and the case fatality rate for eclampsia was 4.78%. About 36.2% of the patients did not receive any form of magnesium sulphate and about 47.5% of the patients arrived at the hospital in taxicabs.

Conclusion: The results suggested that the incidence of eclampsia had risen from 11.1 to 15.82 per 1000 deliveries. It was concluded that magnesium sulphate should be made available in the district hospitals and the polyclinics. Protocol for its use should be circulated and enforced. In addition the Ministry of Health could organize a pool of ambulance services for reasonable fees for the public.

KEY WORDS: ***Eclampsia, magnesium sulphate, maternal deaths.***

INTRODUCTION

Eclampsia still remains one of the major causes of maternal mortality in the developing world including Ghana with a range between 700 and 1000 per 100,000 deliveries[1,2]. Other major causes are haemorrhage and infections especially from induced abortion. In Korle Bu Teaching Hospital the rate of eclampsia was 18% in 1985 and 11% in 1997[2,3]. Though there was a reduction in the rate it was still too high compared to 0.5-1.0% in the developed world[3]. There was the need to find out why the incidence of eclampsia was still high.

There had been various studies about maternal mortality and how the rate of eclampsia contributed to this mortality. From 1981-1985, the Ministry of Health of Ghana estimated that the nationwide mortality rate resulting from eclampsia was 18%. Other studies estimated the rate at 11.0%[3,4].

From 1990-1997 the incidence was 11.1 per 1000 deliveries, in 1991 alone it was 12.4 per 1000 deliveries [4], which were high compared to less than 10.0 in other African countries, and 0.5 per 1000 in the developed world[3,5,6].

In a study between 1990-1997[4] the authors examined other determinants apart from lack of antenatal care that could be responsible for maternal deaths from eclampsia. They found out that other determinants contributing to maternal mortality from eclampsia were poor socio-economic factors, non-awareness of the dangers of hypertension in pregnancy, delays in referring and reaching the hospital.

In 1991 a study in the same hospital[3,4] sought to determine future directions in prevention and management by health care givers and the authors recommended improvement in prenatal care and the provision of health care facilities with accessibility to them. Inspite of these measures the incidence of eclampsia was still increasing.

The incidence of eclampsia had been found to be on the decrease in the developed countries due to improved maternal services. Such improved care had been initiated in the developing countries but unfortunately this had not decreased the incidence and the mortality rate of eclampsia, in Ghana. The scarcity of information on eclampsia from the patients and some health personnel, and cases of near misses made this study a unique exercise to undertake.

The aim of the study was to find out the current trend of eclampsia and the incidence in Korle Bu Teaching Hospital

METHODS AND MATERIALS

Focus group discussions were held at the antenatal clinics of Korle Bu Teaching Hospital and other hospitals located in the Accra Metropolis such as, Mamprobi, Ussher Fort Polyclinics and Ridge District Hospital, Accra. The groups included pregnant women and nurses. They were asked specific questions from pre-tested questionnaires and their responses were recorded using a tape recorder and transcribed later.

All delivery records at Korle Bu Hospital from 1st January 1998 to 31st December 2000 were reviewed. Cases of eclampsia

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Table 1. **Eclampsia and Maternal mortality Rates in Korle Bu Teaching Hospital**

Year	Total No. deliveries	Total No. of Eclampsia	Rate of eclampsia per 1000 deliveries	Total No of deaths due to eclampsia	Total maternal deaths	MMR per 100,000 deliveries
1998	11,705	172	14.69	8	142	1213
1999	11,230	184	16.38	9	107	952
2000	11,750	187	16.38	9	136	1157
Total	**34,685**	**543**	**15.82**	**26**	**385**	**1107**

MMR – Maternal Mortality Rate.

were also collected from the record books at the labour ward and from the archives. The data generated from the records was analysed using both descriptive and analytical statistics with the aid of the Epi-Info – 6-computer program.

RESULTS

During the three-year study period (1st January 1998 to 31st December 2000), there were 34,685 deliveries at KBTH. (Table 1) Out of these, 543 were due to eclampsia, giving the incidence of eclampsia as 15.82 per 1000 deliveries. The case fatality rate was 4.78%.

Of a total of 543 cases of eclampsia over the study period, there were 26 maternal deaths. The average mortality rate was 1107 per 100,000 deliveries, while mortality rate due to eclampsia was 0.75 per 1000 deliveries. The case fatality rate for eclampsia was 4.78%.

Table 2: **Antenatal Care**

	Number	Percentage
Non Attendant	137	25,2%
Private Maternity Home/ clinic	70	12.9%
Government clinic/ Hospital	269	49.6%
Korle Bu Teaching Hospital	67	12.2%

Out of the 543 eclamptic cases seen, 406 were attendants i.e. 74.8% (those who had attended more than three times). The remaining 25.2% were non-attendants (those who attended once or not at all) (Table 2).

Table 3: **Timing of Eclampsia**

	Number	Percentage
Antepartum	325	59.8%
Intrapartum	133	24.4%
Postpartum	83	15.2%
Not stated	2	0.6%

Out of 543 cases of eclampsia seen, 59.8% occurred during the antenatal period, 24.45% occurred during labour and delivery and 15.2% occurred after delivery. (Table 3) In 0.6% of the patients' files studied the time that the convulsions occurred was not stated.

Table 4: **Referrals**

	Number	Percentage
Referred to Korle Bu	285	52.5
Arrived from home	258	47.5%

A little more than half (52.5%) of 543 cases were referred from either private maternity homes, clinics or other Government clinics to KBTH while the remaining 47.5% came directly to KBTH from home (Table 4).

Table 5: **Convulsions subsequent to arrival at KBTH**

	Number	Percentage
Convulsed again in Korle Bu	144	26.45%
Did not convulse again	397	73.05%
Not indicated	22	0.6%

Of the 543 eclamptics, 144 (26.4%) had repeated convulsions whilst in Korle Bu, and 397 (73.05%) did not convulse again. (Table 5).

Table 6: **Administration of magnesium sulphate**

	Number	Percentage
Those who were given	346	63.8%
Those who were not given	197	36.2%

Only 346 (63.8%) had documented administration of magnesium sulphate at KBTH. (Table 6).

Table 7: **Mode of delivery**

	Number	Percentage
Spontaneous vaginal delivery	127	23.3%
Instrumental delivery	7	1.2%
Caesarean Section	409	75.5%

Majority of the eclamptics (75.5%) were delivered by caesarean section, followed by 23.3% spontaneous vaginal deliveries and 1.2% instrumental deliveries. (Table 7)

Table 8: **Parity**

	Number	Percentage
Nulliparous	322	59.3%
Multiparous	221	40.7%

Out of 543 cases 59.3% were nulliparous and 40.7% were multiparous. (Table 8)

DISCUSSION

The maternal mortality rate of 1,107 per 100,000 deliveries during the study period was unacceptably high compared to previously published rates for the same institution. In the same institution, between 1984 and 1994[5,6,7] the average maternal mortality reported was 694 and 734 per 100,000 deliveries. The WHO and UNICEF revised estimate for Ghana for 1996 was 740 per 100,000 live births. This figure is also high when compared to other countries[8,9,10]. Only 1 percent of maternal deaths occured in developed countries[1,12].

The incidence of eclampsia was 15.82 per 1000 deliveries, which also showed an increase over the last reported rate of 11.1 per 1000 deliveries at Korle Bu in 1991-1997 and also in Komfo Anokye Teaching Hospital in Kumasi in 1998. This figure is high when compared with studies in other West African counties[1,9,10,11].

Between 1991 and 1997 the number of eclamptics seen averaged at 128. This number increased to 176 between 1998 and 2000. The total number of deliveries did not change significantly over the whole period. The total maternal deaths between 1991 and 1997 were between 63 and 110 cases per year, but increased from 107 to 142 per year between 1998 and 2000.

Despite the increase in the number of eclampsia cases, the maternal mortality from eclampsia remained the same over the study period, ranging from a rate of 0.6 to 0.75 per 1000 deliveries.

Patients who seek antenatal care had also increased. The study revealed that 74.8% of the eclamptics were antenatal care attendants, which was an improvement over the 59.2% from the 1991-1997 study. It is worth noting that antenatal attendant had increased, and more patients were attending antenatal clinics than previously. Most patients attended Government Hospitals or polyclinics (49.5%) probably because the charges were lower.

In the previous studies there were more intrapartum eclampsia cases as compared to antepartum but this study showed more antepartum cases[5,6].

In this study, 52.5% of the total number of eclampsia cases were referrals from other clinics or hospitals, whereas the remaining 47.5% came directly from home. This large number from home had had no previous treatment or measures to prevent airway obstruction and further convulsions. They did not receive any antihypertensive medication. Most of them arrived in taxicabs and were often unconscious, semi-conscious or still fitting on arrival. Some patients fitted between three to five times at home before they were broutgh to the hospital. Some were also taken to the churches or the shrine before coming to the hospital.

Out of the 543 cases of eclampsia seen 63.8 percent received magnesium sulphate treatment at Korle Bu Teaching Hospital and 36.2 percent did not. This might also explain why 26.5 percent of them convulsed again. It was clear that management protocols were not adhered to. There were inadequate staff and therefore patients were not attended to quickly. In some cases, the time that the first medications were given was not recorded and it was difficult to calculate the time for subsequent ones. This calls for proper documentation by health care providers.

The collaborative Eclampsia Trial involving 1700 women with eclampsia in several countries including Ghana suggested that magnesium sulphate solution should be made readily available for the care of all women with eclampsia regardless of where they live. The Magpie Trial in 33 countries including Ghana also indicated that magnesium sulphate therapy used in severe pre-eclamptics reduced eclampsia by 58 percent and maternal deaths by 45 percent[13].

The caesarean section rate of 75.5 percent was high and may have been due to lack of adequate facilities to monitor the patients or lack of adequate nurses and doctors to monitor them. This might probably be due to the brain drain of qualified personnel.

There is the need for an intensive care unit near labour wards with adequate ancillary diagnostic support to monitor patients. These might help monitor patients adequately and reduce caesarean section rate.

In previous studies nulliparous eclamptics were more than twice the number of multiparous ones but this study showed 59.3% of nulliparous patients as against 40.75% of multiparous eclamptics. Eclampsia might not necessarily be a disease of nulliparous patients but multiparous patients should also be managed critically to prevent fatalities.

This study also showed that knowledge and dangers of hypertension in pregnancy and for that matter eclampsia among pregnant women was lacking among patients who attended the hospital and the surrounding polyclinics. It is therefore suggested that health workers who give health education talks at antenatal clinics should include all the causes of maternal mortality in a very simple and understanding language to be appreciated by the patients. In addition private clinics should also give health talks routinely to pregnant women.

It is not enough to get the patient to attend antenatal clinic but to adequately equip her with very important information.

CONCLUSION

Eclampsia still remains one of the major causes of maternal and perinatal morbidity and mortality in many developing countries and the incidence seems to be rising. Despite the low economic status and lack of current technologies and equipment, health workers together with other Governmental agencies and Ministry of Health could work harder to achieve a reduction in maternal mortality.

We need effective magnesium sulphate protocol in district hospitals and polyclinics so that eclamptics or imminent eclamptics can be properly managed. There should be adequate

sedation of the patient before referral to tertiary centres. The polyclinics, private midwives as well as private medical practitioners should have ambulances to transport these patients to referral centres.

Better communication between health care facilities, the establishment of emergency transport system at vantage points, the upgrading of staff skills, and an intensive care unit at tertiary hospitals would go a long way to improve the management of eclampsia and hence reduce maternal deaths from eclampsia.

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