

Pattern and Outcome of Eclampsia Managed at a General Hospital in North-West, Nigeria.

Type of Article: Short Commentary

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ABSTRACT

Background: Hypertensive disorders of pregnancy constitute major threats to maternal health during pregnancy, labour and the post-partum period. Eclampsia is a leading cause of maternal morbidity and mortality especially in low income and middle-income countries.

Method: A retrospective review of the clinical records of women managed for eclampsia during a two-year period from December 2004 to November 2006 at the General hospital Aliero was undertaken.

Results: Fifty-eight patients were managed for eclampsia during the 2-year period of study. Eclampsia occurred before and during labour in 47 patients while 11 patients had post-partum eclampsia.

Conclusion: The reorientation of caregivers and the community in order to enhance awareness of eclampsia is recommended. The promotion of early presentation, routine antenatal care, prompt referral to secondary centres as well as the provision of the resources for adequate management of eclampsia is advocated.

Key Words: Eclampsia; Pregnancy and Hypertension; Maternal Mortality and Morbidity; Nigeria.

INTRODUCTION

High blood pressure during pregnancy is a cause of serious morbidity and a major cause of maternal and perinatal mortality especially in developing countries¹. Very high blood pressure during pregnancy poses a serious threat to

women and their unborn babies who are at risk of severe complications and even death.

Eclampsia which is a major health problem facing obstetric practice², has been defined as the occurrence of convulsion not caused by coincidental neurological disease³ superimposed on pre-eclampsia⁴. It is a well-recognised major cause of maternal death and perinatal morbidity and mortality⁵. The incidence of eclampsia is usually high and is increasing in developing countries⁶. Despite the reported reduced incidence in the western world, eclampsia remains a significant cause of maternal mortality all over the world^{5,7,8}, and a major cause of maternal mortality in Nigeria⁹. While eclampsia continues to take its toll on women, efforts are being made to understand its aetiology and possible prevention.

The burden associated with eclampsia is not limited to sub-saharan Africa as it has been reported as the commonest direct cause of maternal death in South Africa¹⁰.

Factors that have been identified with the poor outcome of eclampsia in Nigeria include the lack of antenatal care and late presentation to hospitals after the onset of fits^{11, 12}. The importance of early presentation and adequate antenatal care is reinforced by the outcome in well-equipped hospitals, where hypertensive disorders in pregnancy are the cause of a large proportion of maternal morbidity and mortality¹. The aim of this study is to determine the pattern, and the maternal and perinatal outcome of the management of eclampsia at a health facility with limited resources.

METHOD

A 2-year retrospective study of patients

presenting with eclampsia at the General Hospital Aliero, Kebbi state in the north western region of Nigeria was carried out. The hospital is a health centre, which was upgraded to a general hospital. It is located in a rural setting in northern Nigeria with no consultants. Doctors who are general practitioners with no specialist training in obstetrics manage the obstetric patients as the hospital does not have an active obstetric unit. Clinical records of patients managed for eclampsia from December 2004 to November 2006 was retrieved from the records department. The information obtained from the clinical records are bio data (age, marital status), clinical presentation, time of occurrence of seizures, number of seizures, mode of delivery, maternal and perinatal outcome following delivery.

RESULTS

Fifty-eight patients presented with eclampsia during the period of study. All patients in this study were unbooked, received no form any antenatal care and all presented as emergencies. All the subjects were married with an age range was between 20 – 35years and a mean age of 25years. Forty-seven patients had eclampsia before and during labour and 11 after delivery at home. For those with eclampsia before and during labour, 16(34%) had vaginal births and 31(66%) where delivered abdominally by caesarean section. Forty-four (75.86%) were alive and later discharged home while mortality of three (5.17%) patients occurred. All 11(18.97) women who presented with post partum eclampsia were alive and later discharged home. Thirty-seven (78.7%) babies were alive after delivery while 6 (12.8%) was fresh stillbirth and 4 (8.5%) macerated stillbirth. Table I shows perinatal outcome following

Table I Showing Perinatal Outcome Following Eclampsia

Perinatal Outcome	N=47
Alive	37(78.7%)
Fresh Stillbirth	6(12.8%)
Macerated Stillbirth	4(8.5%)

Table II Showing maternal outcome

	Eclampsia	Post-partum eclampsia
Alive	44(75.86%)	11(18.87%)
Mortality	3(5.17%)	-

Table III Showing mode of delivery

	N	%
Spontaneous vagina delivery	16	34
Caesarean section	31	66

DISCUSSION

Eclampsia a condition with a suspected genetic basis¹³ is one of the leading causes of maternal and perinatal morbidity and mortality in Nigeria¹⁴. In spite of the global prevalence of eclampsia the pathogenesis of eclampsia and the events leading to the progression of preeclampsia to eclampsia are poorly understood^{15,16}.

This makes the identification of women at risk for eclampsia and the early diagnosis of preeclampsia an important step in reducing the burden associated with it.

In this study, it was observed that the women preferred home delivery assisted by a traditional birth attendant as the patients presented as emergencies with no form of antenatal care. In addition they all had seizures at home before arrival at the hospital. If they had received some form of antenatal care, pre-eclampsia would have being diagnosed and managed which would have reduced the incidence of eclampsia, and improved pregnancy outcomes. No significant factors could be identified which influenced maternal deaths among women suffering from eclampsia¹⁷ in this study.

A number of different anticonvulsants are used to control eclamptic fits and to prevent further convulsions. The prevailing standard practice is to use anticonvulsants to control the immediate fit and to prevent further seizures¹⁸. The findings so far on maternal and foetal outcomes support the routine administration of magnesium sulphate as the drug of choice for the control of convulsions in women with eclampsia¹⁹. Magnesium sulphate was not available at the centre at the time of the study. Diazepam was the only anticonvulsant available and this was administered to eclamptic patients.

It is however agreed that adequate prenatal care can reduce the occurrence of eclampsia as high-risk cases will receive early referral and hospitalization. Women with pre-eclampsia in under-resourced settings are at a higher risk of developing convulsion (eclampsia) and dying from it²⁰. The only known cure for this disease is

delivery. However early delivery can result in problems for the baby as many hospitals in rural settings in Africa including General Hospital Aliero where the study was conducted do not have a special care baby unit for neonates and do not have the facilities for care of the new born as preterm facilities such as incubators and radiant heater are not readily available. Also trained medical personnel in neonatology such as the neonatologist and paediatric neonatal nurses are only found in hospital in cities and the university teaching hospitals hence children who are born in the villages and rural communities have limited access to treatment as the logistic challenges associated with accessing specialist services such as the existing transportation problems and money for out of pocket payment are usually lacking.

In this study, the maternal outcome though limited by small study population showed that there was a crude maternal mortality rate of 5.17% for the 47 patients who had eclampsia before hospital presentation while no mortality was recorded for those 11 subjects who were managed in the hospital before onset of eclampsia. This highlights the importance of treatment in hospital and early presentation in preventing eclampsia related deaths²¹.

Pre-eclampsia is a serious complication of pregnancy. One of the aims of antenatal care is to detect pre-eclampsia in the hope that the onset of serious complications including eclampsia can be delayed or prevented²². There is need to educate the populace on the importance of antenatal care so that women at risk are identified in order to prevent the risk of eclamptic fit in all pregnant women.

In the prevention of eclampsia, training for doctors in rural areas should be promoted in order to update their knowledge and skill in line with the new trends in medicine and provide modern forms of treatment such as magnesium sulphate.

CONCLUSION

Eclampsia remains a problem in the developing world despite improvements in antenatal care

and facilities²². Eclampsia occurring mainly in the unbooked patients is still one of the major causes of maternal and perinatal mortality arising from prematurity and birth asphyxia, cardiopulmonary failure, acute renal failure, haemolysis, elevated liver enzymes, low platelets count (HELLP syndrome) and cerebrovascular accident.

Good antenatal care will significantly reduce the incidence and improve the outcome especially in teenage nullipara who are mostly susceptible²³. To reduce maternal deaths from eclampsia, more attention must be given to the detection of eclampsia, the provision of information on the advantages of antenatal care to the population at large and training of health professionals in the management of obstetric emergencies¹⁰. Timely referral of high risk patients coupled with availability of emergency obstetric and neonatal care services would reduce the incidence of eclampsia associated morbidity and mortality. Patient and physician education together with improved socio-economic conditions are also likely to improve the situation¹⁵. Antenatal care coverage should also be strengthened to detect pre-eclampsia and prevent eclampsia. The management of eclampsia in the hospital should be optimised to prevent recurrent convulsions and complications after admission¹⁴. There is need for training of traditional birth attendants as they are patronised by women in the rural communities and villages no matter how they are discouraged. They are always available and closer to the people. Short courses should also be provided for those looking after pregnant women who are not obstetricians.

There is still need for more research into the aetiology of eclampsia. pathophysiology and effective management of pre-eclampsia and eclampsia in order to avoid the high maternal mortality associated with this disease.

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