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The Perception of Patients' Relations on the Cause of Eclampsia

Adamu AN[1]*, Tunau KA[2], Hassan M[2] and Ekele BA[3]

[1]Department of Obstetrics and Gynaecology, Federal Medical Centre Birnin-Kebbi, Kebbi State, Nigeria
[2]Department of Obstetrics and Gynaecology, Usmanu Danfodiyo University Sokoto, Nigeria
[3]Department of Obstetrics and Gynaecology, University of Abuja, Nigeria

Abstract

Introduction: Eclampsia is a major cause of maternal mortality especially in low resource setting. Limited data exists on the perception of the cause of this condition among relations of patients who suffered from it. The information may be relevant in reducing the overall burden of eclampsia and any measure or investigation that would assist in reducing the incidence would be worthwhile.

Objectives: To determine what the relations of patients with eclampsia perceived as the cause of the disease and to 00 the 'first aid' treatment given to patients with eclampsia at home before hospital care.

Method: A prospective study conducted at the eclampsia ward of a tertiary hospital. Relations of patients admitted with eclampsia were interviewed within 24-48 hours of arrival using a semi-structured interview guide. Analysis was by the EPI INFO computer package.

Results: One hundred and fifty nine (159) relations of 56 patients with eclampsia were interviewed, mean age was 43 years. Most of the relations had no formal education (80%; 127), 59% (N=75) attributed eclampsia to 'iskoki' (evil spirit) while 20% (N=32) had no idea of the cause of eclampsia. Only 6% correctly related eclampsia to elevated blood pressure. Of the 56 patients with eclampsia, 71% of (N=40 received 'first aid' treatment in the form of 'rubutu' holy water; 'hayaki' and herbs orally. The case fatality in this study was 23%. There was no association between the use of home first aid treatment and maternal deaths (p>0.05).

Conclusion: Poor understanding of the aetiology of eclampsia exists among patients' relations and this may have implication on the immediate care given to the patient. Public enlightenment campaigns to educate people on the cause and complications of eclampsia are necessary.

Introduction

Eclampsia is the occurrence of seizures in a woman with pre-eclampsia [1]. It is usually associated with poor maternal and foetal outcome [2]. It is one of the leading causes of maternal morbidity and mortality. In Nigeria, it is ranked amongst the first three major causes of maternal mortality [3].

Eclampsia may be prevented by early detection and control of pre-eclampsia [1]. Pre-Eclampsia (PE) in its mild form is usually asymptomatic, and diagnosis would usually depend on early identification of clinical signs (elevated blood pressure) or laboratory features (proteinuria) through routine antenatal care. Poor utilization of antenatal care facilities, absence of necessary equipments such as sphygmomanometer and reliable laboratory services at health facilities have made it difficult to maximize routine antenatal care in the prevention of eclampsia in areas that are commonly affected by this condition [4-7].

Pre-Eclampsia in its severe form, however, is associated with some prodromal signs and symptoms. Perhaps people's knowledge of these prodromal signs in the community may hasten identification of danger signs that would facilitate reporting to a health facility thereby resulting in a lower incidence of eclampsia [4]. Other factors such as financial constraints and cultural and religious beliefs may also play a role in shaping peoples' response to symptoms and signs of illness and so influence their decision to seek professional care. An understanding of this culturally patterned behaviour and perception of eclampsia is necessary in the design of appropriate intervention strategies to help reduce maternal mortality.

Sokoto, where this study was undertaken, is inhabited mainly by Hausa-Fulanis of the Muslim faith. Female literacy level is very low, and early girl marriage is not uncommon [8]. Young age and poor literacy level make eclampsia a prevalent condition in this environment. Studies have shown that eclampsia is mainly a disease of the young primigravidae and educated mothers are more likely to recognize a problem, seek medical care, and report a problem [9,10].

This study aimed at determining what the relations of patients with eclampsia perceived as the cause of the disease, the use of 'first aid' treatment at home on such patients before hospital care, and its effects on patient's outcome.

Materials and Methods

This was a cross-sectional descriptive study conducted at the eclampsia ward of a tertiary hospital over a three-month period. Relations who accompanied the patients with eclampsia to the hospital formed the study population. In most instances more than three relations accompanied the patient to the hospital; out of these, three were selected by convenience sampling (based on whether or not they had witnessed the patient fitting) for each consecutive patient admitted with eclampsia over the study period. An average of 3 relations who had witnessed the eclamptic fit for every consecutive patient who was

*Corresponding author: Aisha Nana Adamu, Department of Obstetrics and Gynaecology, Federal Medical Centre Birnin-Kebbi, Kebbi State, Nigeria, Tel: +234 80 35978715; E-mail: nazaimah@yahoo.co.uk

admitted with eclampsia within the period of study was interviewed after obtaining their consent. In this manner, one hundred and fifty nine (159) patients' relations comprising mainly mothers and aunties were thus interviewed. All interviews were conducted individually using a semi-structured questionnaire within 48 hours of admitting the patient to the ward using a semi-structured questionnaire. The questionnaire was prepared in English language and was translated to Hausa which is the major language spoken in the area of study. The translated version was pretested on a sample of eclamptic patients who were, then, not included in real study. Information on age, relationship with patient, perception of the cause of eclampsia, and other parameters of interest as reported in the results, were obtained and document. Analysis was by the EPI INFO computer package. Information given by one respondent on medication given at home was corroborated with information from the next respondent for the same patient. Where relevant, test of significance was performed using chi-square test.

Local terms used

'Hayaki'-traditional Hausa way of administering medication where medicinal leaves or herbal preparations are burned in hot charcoal, the patient is then made to inhale the smoke so generated as a form of medication.

Results

One hundred and fifty nine (159) relations of fifty-six (56) patients were interviewed in this study; this comprised 107 females and 52 males (Table 1). Mean age of respondents was 43 years. They were all of the Islamic faith and were mainly of the Hausa-Fulani ethnic group (94%). More than 80% of them (N=127) did not have any form of formal education.

About half the proportion of respondents (47%, N=75) attributed eclampsia to 'ISKOKI' (Hausa word for evil spirit) while God was blamed by 4.4% of the cases (N=7). Thirty-two of the 159 respondents (20%) had no idea on the possible cause of the fits (Table 2).

Forty of the 56 patients (71%) received one form of treatment or the other at home prior to presentation (Table 3). Many of patients' relations (30%, N=17) resorted to the use of 'rubutu' or holy water (obtained by using locally made ink to write qur'anic verses on a wooden slate and then washing it in a small bowl of water for the patient to drink). Other forms of treatment given included herbs (18%, N=10), 'hayaki' (16%, N=9), and orthodox medication 7% (N=4). There were no reported complication (burns, choking) from these traditional forms of medication. In addition to these forms of treatment, 48.2% of the patients (N=27) also received prayers in the form of recitation of verses from the holy Qur'an as additional treatment.

A total of 56 patients with eclampsia were admitted within the study period; their mean age was 20 years, and the range was 16 to 45 years (Table 4). The patients were predominantly Hausa-Fulanis (94.6%, N=53). All the 56 patients had no antenatal care. Primigravidae constituted 71% (N=40) of the patients. Intrapartum eclampsia was the most common type of presentation (58.9%, N=33). Case fatality was 23.2% (N=13). There was no significant difference in outcome between patients that received treatment at home and those that did not; $X2=0.303$ (Yates corrected), df=1, p>0.05 (Table 5).

Discussion

Only 7% of the total number of patients' relations studied correctly related eclampsia to elevated blood pressure. Most of the respondents attributed the cause of eclampsia to 'evil spirits' (Iskoki). This belief

Characteristics	Number	%
Age distribution		
20-30 yrs	33	20.8
31-40 yrs	41	25.7
41-50 yrs	37	23.3
51-60 yrs	42	26.4
>60 yrs	6	3.8
Total	159	100
Gender		
Females	107	67.3
Males	52	32.7
Total	159	100
Educational Status		
No formal education	127	80
Primary level	18	11.2
Secondary level	14	8.8
Total	159	100
Relationship to the patient		
Aunt	43	27.1
Husband	20	12.6
Mother	21	13.2
In-laws	16	10.1
Grandparents	14	8.8
Siblings	15	9.4
Father	5	3.1
Others	25	15.7
Total	159	100
Ethnic group of respondents		
Hausa	144	90.6
Fulani	8	5
Zabarmawa	7	4.4
Total	159	100
Religion of respondents		
Islam	159	100

General characteristics of the study respondents i.e. relations of patients with eclampsia

Table 1: General characteristics of the Patients' relations (N=159).

Perceived Cause	No. of respondents	%
Evil spirits	75	47
Pregnancy/labour/puerperium	35	22
God	7	4.4
High blood pressure	10	6.3
'No idea'	32	20
Total	**159**	**100**

Respondents' perceived cause of eclampsia

Table 2: Perceived causes of eclampsia.

may explain why up to two third of the patients were given some form of traditional treatment prior to presentation; this has been observed by some workers in earlier studies [9]. The intervention may give the relations some comfort that some form of care was being instituted, but it may further delay the decision to seek professional care thereby increasing the risk for repeated fits. The prognosis in eclampsia may adversely be affected by the number of fits experienced by the patient [11].

The interpretation and response to illness in any society may be influenced by its culture. Where certain symptoms are attributed to "normal pattern" in a given condition, there may be a delay in seeking help until symptom becomes severe [12]. A lot transpires in the decision making process that eventually leads to a consultation or visitation to a health provider from the time a symptom is perceived to

Type	No. of patients	%
'Rubutu'*	7	4.4
Herbs†	10	6.3
'Hayaki'*	32	20
Total	**159**	**100**

Various forms of first aid treatment administered to patients at home prior to presentation

*Herbs in this context are a collection of different leaves, plant roots, pieces of tree stem or bark, which are soaked in cold water or infused in hot water singly or in combination to form a concoction that is given to the ill person as a form of medication

†Hayaki' is performed by sprinkling herbs on hot ember. The smoke generated is supposed to be medicinal. The patient is exposed to this smoke either by covering her with a piece of cloth enclosing the source of smoke or by leaving her open in the room where the herb is being burnt, the intension being to drive away the evil spirits!

'Rubutu' could be likened to 'Holy Water'. It is obtained by first writing some verses of the Holy Qur'an on a slate using native ink that is later washed. It is this washing (Holy water) that is consumed orally or rubbed on the skin of the ill person as medication against a variety of diseases.

Table 3: Treatment received by Patients at home.

Patient Characteristic	Number of respondents	%
Age distribution		
<20	40	71.4
20-29 yrs	10	17.9
30-39 yrs	4	7.1
≥ 40 yrs	2	3.6
Total	56	100
Parity		100
Primigravidae	40	71.4
Para 1-5	13	23.2
=/>6	3	5.4
Total	56	100
Booking status		
No antenatal care	56	100
Received antenatal care	0	0
Type of eclampsia		8.8
Ante partum	11	19.6
Intra-partum	33	58.94
Post-partum	12	21.5
Total	56	100
Ethnic group of respondents		13.2
Hausa	48	86.5
Fulani	5	8.1
Zabarmawa	3	5.4
Total	56	100
Maternal outcome		15.7
Discharged	43	76.8
Died	13	23.2
Total	56	100

General characteristics of patients admitted with eclampsia

Table 4: General characteristics of the Patients.

First aid given	Discharged	Died	Total
Yes	32	8	40
No	11	5	16
Total	**43**	**13**	**56**

Chi-squared=0.303 (Yates corrected), df=1, p>0.05
There was no significant association between maternal outcome and first aid treatment

Table 5: Relationship between maternal outcome and use of first aid treatment at home.

the time of consultation. It is a whole process that involves synthesis of family input, previous experience, and the interpretation of the symptom [or sign]; these make one decide to self medicate, ignore, or consult a professional [13]. The perception of family and friends on the severity of a symptom is also an important factor in deciding whether professional care is sought for the illness or not [14].

Where the cause of an illness is unknown, it is simply attributed to God in which case He may be relied upon to provide cure; this action may affect the decision to seek care [15,16]. This is supported by the view of one of the respondents.

'No, I did not give her anything because this illness is from God and it will stop on its own, no I wouldn't have brought her to the hospital had it not been for her father'.

Prayers to God were offered as a form of treatment in up to half the number of patients. It is a relatively benign form of remedy. In another half, drinks in the form of herbal preparations, holy water (also referred to as 'rubutu' in Hausa language) were given. The use of various forms of oral concoctions following a fit when consciousness had not been regained may increase the risk of vomiting and aspiration. In addition, the chemical nature of the herbal remedies may increase the risk of Mendelson's syndrome for those eclamptic patients that may eventually require surgery should they aspirate.

The use of 'Hayaki' as a form of treatment at home, while not invasive per se, is associated with its own risks. The risk of sustaining burns or choking with the smoke is obvious especially where supervision of the patient is suboptimal. Fortunately none of the patients in this study sustained any such injury. What is not known is whether the less fortunate patients died before presentation. Thus while the aim of the home remedies was to give some form of treatment, the result may be worsening of the patients' clinical state. This may not be understood by the relations since, to them, the traditional mode of treatment is the cheapest, easiest to obtain, and most trusted mode of treatment [17].

Maternal outcome was not affected by the use of first aid treatment at home. This was so in spite the possible risks for complications (such as burns) associated with the use of such treatment modalities as discussed above. This may be as a result of the small sample size. This is a recognised limitation of the study. Perhaps a larger sample size would give a different result.

The target for awareness raising campaigns might appear to be the female population since in this study more female than male relations accompanied the patients to the hospital. The role of the male members of the family in decision-making is supreme in some cultural settings and this usually has a negative impact on the health seeking behaviour of the women [18,19]. In their study on maternal mortality and delays, Okusanya et al. found that about 78% of the deaths were attributable to types one and three delays [20]. Thus, both male and female members of the community should be targeted in campaigns towards prevention of eclampsia.

The characteristics of the patients in this study were not different from findings in other studies. Eclampsia is still a disease of the young, unbooked, primigravidae [21].

The study had some limitations, the medication given to most of the patients who had been given these was not quantified nor was the duration of exposure to these agents known. Further analysis relating traditional medications or first aid treatment for eclampsia to fetomaternal outcome in patients with the condition could not be done. It would be interesting to find out if the duration of exposure to,

and quantity/amount of these has any significant effect on fetomaternal outcome. We cannot, therefore, conclude from this study that use of traditional medication in patients with eclampsia has no effect on fetomaternal outcome. This could be an area for further research.

In conclusion, our results demonstrate that the study population perceived eclampsia as a disease caused by 'evil spirits' rather than being a pregnancy related complication. We recommend intense public campaign on the cause and recognition of eclampsia as a tool for early presentation to a health facility.

Acknowledgement

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