

Eclampsia: a clinical prospective study in a referral hospital

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ABSTRACT

Objective: To study Sociodemographic status of eclamptic patients with special emphasis on age, parity, gestational age, antenatal care, socioeconomic status and types of eclampsia.

Methods: A prospective clinical study was carried out on the eclampsia patients in the Obstetrics & Gynaecology department of Fakhruddin Ali Ahmed Medical College and Hospital. Patients with convulsion other than eclampsia were excluded. Sociodemographic status, ante natal care, and gestational age were studied with types of eclampsia (ante partum, intrapartum, postpartum) and their relationship.

Results: 60 numbers of cases of eclampsia were studied. Majority of patients were in the group of 20 – 25 yrs (60%), a large number had irregular antenatal check up (68.33%), (85%) of cases were primigravida, major group of patients (55%) belongs to lower socioeconomic condition. Maximum number of patient were below 37 gestational age (53.33%) and ante partum variety of eclampsia was commonest than any other (56.67%).

Conclusion: Eclampsia is still a major health problem in India. It is basically a preventable disease if pregnant women get regular antenatal care and proper health education. By giving mass awareness towards the importance of antenatal care, ensuring early detection of symptoms of preeclampsia in peripheral hospitals and providing adequate treatment, the incidence of eclampsia can be reduced promptly.

Key words: Eclampsia, antenatal care, SES, parity, gestational age, types of eclampsia

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Eclampsia is a fatal disorder among pregnant women. Throughout the world, eclampsia remains an important cause of maternal mortality, accounting about 50,000 deaths worldwide [1]. Incidence of maternal mortality due to eclampsia has decreased in the past three decades from 5 to

10 percent to less than 3 percent of cases [2]. In developed countries, eclampsia complicates about 1 in 2000 deliveries[3], but in developing countries, the prevalence varies widely, from 1 in 100 to 1 in 1700 [4-6]. The incidence of eclampsia in India is 0.94 to 1.8% in all pregnancies.

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Eclampsia may be antepartum, intrapartum and postpartum. Antepartum eclampsia is more dangerous than postpartum eclampsia [7]. Primigravida are at higher risk of developing eclampsia [8]. Eclampsia is most common in the last trimester of pregnancy and becomes increasingly more frequent as term approaches [2]. Illiteracy, lack of health awareness, poverty, poor linkage of community with comprehensive health facilities and superstitious beliefs prevent women from seeking medical advice during pregnancy and all of these combined together contributes to eclampsia.

Fakhruddin Ali Ahmed Medical College Hospital (FAAMC) is a referral centre for the lower Assam region, which is a home of about 10 million population. Also, this region has wide variety of language, ethnicity and Socio-cultural variation. Thus, FAAMC gets patient from various socio-economic and cultural milieu and hence the study conducted reflects the general status of maternal health care in this region.

Materials and Methods

A prospective clinical study was carried out in the O&G department of FAAMC from October 2012 to June 2013. All 60 cases of eclampsia diagnosed during that period were included in the study. Data were collected from patient or attendant (if patient is unconscious/semiconscious) by preset questionnaires and interview at the time of admission. All these data were analyzed by using software packages Excel and GraphPad.

Operational definitions:

1. Eclampsia is defined as occurrence of convulsion in a patient with pre-eclampsia with no coincidental neurological disease. The diagnosis of pre-eclampsia is based mainly on the presence of hypertension (BP \geq 140/90 mm of Hg) after 20 wks of gestation and proteinuria (\geq 300 mg/24 hr or 1+ dipstick). (2)

2. Antenatal care were categorised as follows: [9]

a. Quality antenatal care – At least 4 or more check-up by an authorized service provider along with birth planning and awareness regarding eclampsia.

b. Regular antenatal care – At least 4 or more check-up by an authorized service provider.

c. Irregular antenatal care - Less than 4 antenatal check-up by an authorized service provider.

d. No antenatal care - Total absence of antenatal check-up or irregular check-up by an unauthorized person.

Authorized service provider was defined as a person who had skills to do proper antenatal check-up and necessary training to impart awareness. ANMs, GNMs and Doctors were considered authorized service provider.

3. Socio – economic status – [10]

SES was categorised based on Kuppusswamy's Socio-economic scale (2012). Kuppusswamy's scale considers monthly income, education status and occupation for calculation of socio-economic status. Upper, Upper Middle, Lower Middle, Upper Lower and Lower Socio-economic class was defined on scores of 26-29, 16-25, 11-15, 5-10 and <5 respectively.

Observations and Discussion

In the present study, most (60 percent) of the patients were between 20 – 25 years. It relates to many other studies, where it is found that eclampsia is prevalent below the age of 25 yrs. Rowshan et al assessed 416 patient of eclampsia and 77 percent were found between 20 – 25 yrs [9]. Similarly, Parmeet Kaur[11] in her study observed maximum number of patient within this group.

Gravidity also influences in occurrence of eclampsia. Primigravida are more prone to develop eclampsia than multiparas. In this study, it was found that most of the eclamptic patients were primigravida (85 percent). This result is comparable to other study like Shiraz's et al, Dutta et al and Shaheen B et al (12, 13 and 14).

In the study, it was observed that majority of the patients had history of irregular antenatal care (68.33 percent). No patient got quality antenatal care. This result is comparable with other study [15, 16, 17, 18]. Similarly Jain et al, 1988 [19] and Swain et al, 1992 [20] documented that lack of antenatal care acts as a high risk factor for

Table 1. Age Distribution of Patients

Age (yrs)	No of patient	Percentage
< 20 yrs	19	31.67
20-25 yrs	36	60
>25 yrs	5	8.33

Table 2. Antenatal Care

Category	No of patient.	Percentage
No antenatal care	17	28.33
Irregular antenatal care	41	68.33
Regular antenatal care	2	3.33
Quality antenatal care	0	0

Table 3. Gravida and Parity Distribution

Gravida / Parity	No of patient.	Percentage
Primigravida	51	85
Multigravida	9	15

Table 4. Socioeconomic Status

Category	No of patient	Percentage
Upper class	0	0
Upper middle class	0	0
Lower middle class	2	3.33
Upper lower class	25	41.67
Lower class	33	55

Table 5. Types of Eclampsia

Types	No. of patients	Percentage
Antepartum	34	56.67
Intrapartum	21	35.00
Postpartum	5	8.33

Table 6. Gestational Period

Gestational period (in weeks)	No. of patients	Percentage
< 28wks	1	1.67
< 37 wks	32	53.33
≥ 37 wks	27	45

Table 7. Religion

Religion	No. of patient	Percentage
Hindu	10	16.67
Muslim	50	83.33

eclampsia. They had found that lack of antenatal care among eclamptic patient were about 93.99 percent and 76.66 percent respectively. But on the other hand in 1994, Douglas and Redman [21] reported that eclampsia was observed despite antenat

al care (70 percent) and also within one week of patient's last visit to a doctor or midwife (85 percent). In India, only 37 percent of woman aged 15 – 49 yrs provided four times antenatal care during pregnancy by any provider [22]. But in Assam mothers who had at least 3 antenatal care visits, consumed IFA for 90 days and received at least two TT injections during pregnancy for the last 5 years are 39.30 percent, 16.20 percent and 65.40 percent respectively[23]. Therefore, it is not abnormal that most of the patients had no antenatal surveillance in the study.

In the current study, majority of the patients was found in upper lower class (41.67 percent) and lower class (55 percent). Poverty, illiteracy are some important factors which prevent woman in this region from seeking antenatal advice during pregnancy. Similar findings were found among the woman of developing countries by Dlamini [24] where poverty was marked as risk factor for developing pre-eclampsia. Besides, he also correlated the severity of pre-eclampsia with poverty in that study. On the other hand, Gudmundsson [25] explained that the risk and severity of pre-eclampsia is not associated with poverty but his study was done among the women of developed countries. The literacy of mother also play important role in developing eclampsia. The majority of patients who developed eclampsia had a very low literacy status.

In the study, 56.67 percent patients developed antepartum, 35 percent intrapartum and 8.33 percent postpartum eclampsia. In different studies, antepartum eclampsia is found as commonest variety and the incidence were 29.13 percent [26], 51.20 percent [27] and 60.20 percent [28]. But in few other study found the upward trend of postpartum eclampsia and intrapartum eclampsia dominance in relation to the antepartum eclampsia.[29]

In this study majority of the patients 32 (53.33 percent) were found at gestational age below 37 weeks and 27 (45%) patients were presented gestational age \geq 37 weeks. Only one patient was found at the gestation age less than 28 weeks. Similarly in the study from UK (44 percent) of cases occurred eclampsia before completion of 37 weeks of gestation.[30]

83 percent of the eclamptic patients are found to be Muslims in the study. Whoever, since the most of the population of the catchment area of the hospital are from Muslim community hence the high percentage does not indicate any religious propensity.

Conclusion

In conclusion of the study, it is found that lack of antenatal care, poverty, illiteracy are needs to be addressed to prevent this serious complication of pregnancy. Eclampsia basically is a preventable disease if the pregnant women get regular antenatal care and proper health education. Therefore to achieve this goal, early antenatal booking, regular and careful follow up, awareness towards the disease and effort to detect early complication are most essential.

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