ORIGINAL ARTICLE

Frequency of Primigravida with Eclampsia

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ABSTRACT
Objective: To determine the frequency of primigravidas with eclampsia.
Study Design: Cross-sectional study.
Study Setting and Duration: Department of Obstetrics & Gynecology "C Ward", Ayub Medical Teaching Hospital, Abbottabad from 15th September 2020 to 15th March 2021.
Methodology: One hundred and sixty women with eclampsia were included in the study. Demographic details as well as parity information and weight and primigravida were noted.
Results: The mean age of 26.430±2.41 years, mean gestational age 34.539±2.40 weeks and mean weight was 65.727±4.47 Kg. Primigravida patients with eclampsia were 70.3%.
Conclusion: Primigravida is one of the major factors in development of eclampsia.
Keywords: Pregnancy, Eclampsia, Primigravida

INTRODUCTION

Preeclampsia as well as eclampsia is pregnancy related hypertensive ailments which have a high impact on maternal and perinatal health. These two disorders are considered as third top mortality related ailments globally.[1,2] Data from under developed countries suggests 1/3rd million causalities and 6 million perinatal mortalities related with preeclampsia and eclampsia.[3] Being the third most populated country of the world Pakistan shares the 3rd highest burden of mother and child related mortality. The prevalence of maternal mortality in Pakistan as a consequent of eclampsia is 34%.[4] World Health Organization estimates 12 percent global maternal death worldwide.[5,6]

Eclampsia which is considered to be a complication of pre-eclampsia, is defined as the presence of new onset grand mal seizures appearing antenatally, during labour or till the end of perpurieum.[7] The exact pathophysiology of eclampsia is still unknown, however, abnormally implanted placenta is thought to be major predisposing factor till date. It decreases uterine and placental perfusion which leads to hypoxia, oxidative stress, release of anti-angiogenic factors and inflammatory mediators into the maternal circulation that are responsible for catastrophic signs and symptoms appearing in eclamptic women.[8] The most reported prodromal symptoms of eclampsia are severe headache, visual disturbance and epigastric or right upper quadrant pain.[9]

Most notorious risk factors of eclampsia include maternal age less than 20 years, nulliparity, low socioeconomic status, low educational status, high body mass index, inaccessibility to antenatal care, family history of preeclampsia and pre-existing medical orders including hypertension, diabetes, renal disease and thrombophilia.[9] Among these risk factors, nulliparity has strong association with development of eclampsia. In a study by Gudu et al[9] have also showed that 70% eclamptic patients were found to be primigravidas.

In another study by Mahran, et al[10] have showed that 77.2% eclamptic patients were primigravidas.

The purpose of this study is to determine the frequency of primigravidas with eclampsia so that they can be given better antenatal care as they make the major bulk of eclamptic patients and to decrease the rate of eclampsia as it is among the top three causes of maternal mortality in Pakistan

MATERIALS AND METHODS

This cross-sectional study was conducted at Department of Obstetrcis & Gynaecology "C ward" Ayub Medical Teaching Hospital, Abbottabad from 15th September 2020 to 15th March 2021 and 165 women were enrolled. All women age 18-40 years, primigravidas, gestational age more than 20 weeks and eclampsia as per operational definition were included. Patients having tetanus, hypoglycemia, epilepsy, ketoacidosis, encephalopathy or meningitis, pyrexia or suspected with drug toxicity were not included. Each participant enrolled was completely informed about the objectives of the study and their informed consent was taken. Demographic details, gestatienal age, parity as well as weight information were documented. The data was entered and analyzed through SPSS-25.

RESULTS

The mean age was 26.430±2.41 years, mean gestational age 34.539±2.40 weeks and mean weight was 65.727±4.47 Kg (Table 1). Demographic information of the patients i.e. diabetes mellitus, hypertension and cardiac disease and primigravida patients was 70.3% are shown in Table 2.

Table 1: Descriptive statistics of age, gestational age and weight n=165

Demographics	Mean±SD
Age (years)	26.430±2.41
Gestational age (weeks)	34.539±2.40
Weight (Kg)	65.727±4.47

Table 2: Demographic information of the patients (n=165)

Variable	No.	%
Diabetes mellitus		
Yes	12	7.3
No	153	92.7
Hypertension		
Yes	51	30.9
No	114	69.1
Cardiac Disease		
Yes	7	4.2
No	158	95.8
Primigravida		
Yes	116	70.3
No	49	29.7

DISCUSSION

In the present, the age of participant being within 18 to 30 years showed the decrease in early marriage in this region. This age group has lower risk of obstetrics complications. However antennal booking was still not taken presenting higher rate of lack of awareness among patients. The information and awareness about antennal time prevents the complications reduced with Rh factor in combabilities between the mother and the child. Researches from Egypt have presented prevalence of eclampsia as 1.2% which is higher than European region while lower than the Asian and some African areas and is dependent on various socioeconomic class differences with difference in antennal booking awareness.[11-13]

Younger age in addition to low socioeconomic state and antennal awareness are major reasons of eclampsia. Nulliparous is another high defined risk of eclampsia.[14,15] Placenta vasculopathy as well as endothelial disorders are associated with obesity and eclampsia.[16,17] Familial history also escalates

eclampsia as observed in 14.4% of the participant in current research as well as elsewhere.[14]

Other factors as minima marriage duration, low socioeconomic standards and pre existing medical conditions have also high influence of formation of eclampsia. Yousefi et al[18] suggested the same results in their research. WHO elaborates on socioeconomic and illiteracy risk for eclampsia.

Hypertension, anemia as well as diabetes increases pre-eclampsia risk as was observed in 30.9 31.6 and 7.3% patients respectively. With renal and thrombophilia as also significantly associated risks attributing to vasculopathy.[14,15] Longer duration in delivery as well as cesarean increases risk of preeclampsia as could be identified with higher number of cesarean sections performed. The reason can be inadequate monitoring of the fetus.[19,20] Seizure formation and severe preeclampsia can be rescued by use of magnesium sulphate as in the present study. However in various setting magnesium sulphate is not available escalating the severity of preeclampsia. Patients with severe cases require aggressive dose treatment for hypertension management. Unfortunately, the present research lacks the information in this context. The use of oral anti-hypertensive drugs cannot be administered immediately in few cases due to interrupted conscious status of the patient. Suboptimal-blood pressure is also an additional risk of complication in severely hypertensive women.[21,22]

CONCLUSION

The primigravida is one of the major factors in development of eclampsia. Morbidity from eclampsia was high in current research setting. Refining antenatal as well as emergency-obstetric and neonatal-care is compulsory to progress the positive health outcomes.

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