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# Title-" Clinical profile and prognosis of prenatal and postnatal women who presented with seizures in a central India tertiary care hospital"

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**Background**: Convulsions during pregnancy is major cause of maternal and fetal morbidity and mortality. the various causes of seizures during pregnancy include anti-phospholipid syndrome, eclampsia, cerebral vein thrombosis(CVT), thrombotic thrombocytopenic purpura, cerebral infarction, drug and alcohol withdrawal, and hypoglycaemia

**Objective:** To record and analyze continuous and category variables of antenatal and postnatal patients presenting with seizures.

**Materials and Methods: Methodology**- the present study conducted in the tertiary care hospital total 270 patient presented with seizure and patient/relative were ready to give consent were included in the study. **Study Design**: - observational Cross-sectional study.

**Result-** 65% of the participant were belong to age group of 20-25 years the mean age the mean age of participant with 90 % CI was 23.4667 ±0.7 (±2.98%).64.4% cases were primigravida,and 35.6% were multigravida. morbidity seen in most of cases out of all participant 59.25% were become morbid ,40(29.6%) were remain uncomplicated and 11.11%were died. The mortality rate were observed in our study is 11.11%.Fetal outcome at time of birth the out of all delivery 222 were live birth while 48 were IUD/still birth.

**Conclusion-** Seizure is serious threat to the maternal and fetal/neonatal health and major contributor of maternal mortality and neonatal mortality.prompt diagnosis and treatment required for it.

**Key Words - Seizure, Eclampsia,IUD,primigravida,mobidity,antenatal,postnatal**

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**Introduction-** Seizures are frequent disorders that are frequently encountered in clinical settings; up to 10% of the general population will have at least one seizure in their lifetime. Pregnancy-related convulsions are a leading cause of maternal morbidity, mortality, and foetal mortality. Antiphospholipid syndrome, eclampsia, cerebral vein thrombosis (CVT), thrombotic thrombocytopenic purpura, cerebral infarction, drug and alcohol withdrawal, and hypoglycemia are a few of the different conditions that can induce seizures during pregnancy [1]. About 0.5% of pregnancies are affected by epilepsy, a chronic neurologic illness that can make pregnancy more difficult. With 1% to 2% of women with epilepsy experiencing a seizure during labour or within the first 24 hours following delivery, the risk of seizures increases upon delivery [2]. Both the mother and the foetus are at risk when a pregnant woman experiences uncontrolled seizures. Tonic-clonic seizures can harm the mother physically and result in abruptio placentae, while the foetus can suffer from hypoxia, acidosis, cerebral haemorrhage, and even die[3]. Venous thromboembolism (VTE), including cerebral venous thrombosis, has well-established causes in pregnancy and puerperium [4,5]. Pregnancy and the puerperium are prothrombotic states due to several physiological alterations in the coagulation system[6, 7]. The primary clinical characteristics of obstetric CVT include headache, focal impairments, seizures, and changes in mental state. It is crucial to differentiate obstetric CVT from other pregnancy-related central nervous system (CNS) illnesses such eclampsia and postpartum cerebral angiopathy. Mental status abnormalities, particularly somnolence/drowsiness, are more frequently found in obstetric CVT[8]. Compared to non-pregnant women, the risk of stroke and cerebrovascular consequences is higher during pregnancy and puerperium[9]. Although there is a reduced reported incidence of primary brain tumours in pregnant women, the relative frequencies of each form of brain tumour seem to be comparable in both pregnant and non-pregnant women[10].

Pregnancy-related malaria is linked to greater rates of mortality and morbidity, such as cerebral malaria, maternal anaemia, intrauterine growth restriction, early labour, stillbirth, and abortion [11,12]. Additionally, the medications used to treat malaria can dramatically increase the risk of this disease's consequences. Within the same nation, there are significant regional variations in the prevalence of eclampsia. Eclampsia is more common because of subpar prenatal care, low socioeconomic level, and illiteracy. The clinical characteristics and results of prenatal and postnatal cases who presented with seizures in our hospital are described in this study.

**Materials and Methods-** In an Indian tertiary care hospital, this prospective observational analytical study was carried out over the course of one year. After receiving informed consent in writing from a close relative, a total of 135 pregnant women admitted to an emergency room or intensive care unit (ICU) with convulsions throughout their pregnancy who were identified on the basis of history and clinical grounds were included in the study. 3 on the GlassGow scale for the patient Women who were pregnant and experienced convulsions because of a head injury, drug addiction, or food poisoning were not allowed to participate in the study. Initial stabilisation of vital recording and functioning was done upon arrival at the emergency unit.

**Result**– In the current study, the majority of participants (65.92%) belonged to the 20–25 age range; their mean age with 90% CI was 23.4667 0.7 (2.98%). 89% of the all participants were unbooked or irregular ANCs, while 11% were booked.5.9% of the participants were admitted directly, while 94.1% were recommended cases. In the current study, primigravidae (nulliparous) made up the bulk of participants; out of all subjects, 64.4% were primigravidae, and 35.6% were P1-P4. \

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| Table 1- Age wise distribution of pregnant females of eclampsia | | |
|---|---|---|
| **Maternal age in years** | **No. of participants (n=270)** | **Percentage** |
| **<20** | **30** | **11.11** |
| **20-25** | **178** | **65.92** |
| **26-30** | **48** | **17.77** |
| **31-40** | **14** | **5.18** |

In the current study, 58 (43%) of the pregnant women were between 24 and 30 weeks along with 32 (23.70%), 45 (33.33%), and 45 (33.33%) weeks along. and there is also one postnatal case. The majority of participants in the current study's mode of delivery Delivered by LSCS:42.22%, Instrument-assisted delivery: 37.03%, Normal vaginal delivery: 16.30%, Other: 3.70%, and Hystrectomy: 0.74%.

| Table 2 Obstetrics Parameters | | | |
|---|---|---|---|
| **Particulars** | | **No.of participants** | **Percentage** |
| **Parity** | **Primigravida** | **174** | **64.4** |
| | **Multigravida** | **96** | **35.6** |
| **Gestational Age** | **24-30** | **116** | **42.96** |
| | **31-36** | **64** | **23.70** |
| | **37-40 &PNC*** | **90(2*)** | **33.33** |
| **Mode Of Delivery** | **Normal Vaginal Delivery** | **22** | **16.30** |
| | **Assisted Vaginal Delivery.** | **50** | **37.03** |
| | **LSCS** | **57** | **42.22** |
| | **Hysterectomy** | **1*** | **0.74** |
| | **Others** | **5** | **3.70** |

Out of 270 participants in the current study, 59.25% became morbid, 29.6% remained uncomplicated, and 11.11% passed away. In the current study, 43% of seizure cases had a frequency of less than 2, while 57% of cases had a frequency of more than 2. In situations where the seizure frequency was less than 2, 64 participants were morbid, 42 had no complications, and 10 passed away. When the frequency of seizures exceeded 2, 90 participants were morbid, 38 had no complications, and 20 passed away. A statistically significant difference was found in each category. Out of a total of 268 deliveries, 222 were live births and 46 were IUD/still births. The majority of the participant's cases (50%) had HELLP syndrome with DIVC, followed by 32.5% of cases with AKI, 12.5% of cases with pulmonary oedema, and 5% of cases with intracerebral haemorrhage. 222 live births had newborn complications, of which 132 had severe complications. In accordance with the frequency of seizures, we have seen it. When the result is statistically compared to the frequency of maternal seizures, statistically significant results are found.

| Table 3 Maternal and Fetal Outcome | | | |
|---|---|---|---|
| | | **No.of participants(n=270)** | **Percentage** |
| **Maternal Outcome** | **No Complication** | **80** | **29.6** |
| | **Morbidity** | **160** | **59.25** |
| | **Death** | **30** | **11.11** |

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| | | | |
|---|---|---|---|
| **Fetal outcome** | **Live Birth** | **222** | **82.83** |
| | **Still Birth/IUD** | **46** | **17.16** |
| **Causes of Maternal Morbidity** | **Abruption placenta** | **24** | **15** |
| | **DIVC** | **24** | **15** |
| | **acute kidney injury** | **32** | **20** |
| | **Pulmonary oedema** | **24** | **15** |
| | **Others** | **56** | **35** |

**Discussion-** In our investigation, we found a maternal mortality rate of 11.11%, . Out of 270 participants, 59.25% developed morbidity, while 29.6% remained uncomplicated. which demonstrates how serious the situation is. In the current study, participants aged 20 to 25 made up the majority 64.92%, followed by participants aged 26 to 30. 17.77% of participants were under 20 years old. 11.11% of participants and 5.18% of those in the 31–40 age range came from this group. The participant's mean age with 90% confidence interval was 23.4667 0.7 (2.98%). The study conducted by Sharshar T et al.[13] can be compared to the aforementioned finding. Out of 100 patients, 60 (about 60%) suffered convulsions brought on by eclampsia. The patients were 23 years old on average. Additionally, it is consistent with the study's 25-year average age conducted by Kumar S. et al. The mean age of the participants in Mauro et alprevious .'s study[15] was 22.35 years. Khan A et al[16] state that 49.57% of patients are in the 20–24 year age range, but in our study, 65.92% of participants were in the 20–25 year range. Primigravida (nulliparous) predominates in our study; among all participants, 64.4% were primigravida (nulliparous), and 35.6% were multigravida ( P1-P4). It may be equivalent to Kumar S. et alstudy[14], .'s which showed 71% of primigravida and 29% of multigravida, but differs from Khan A. et alfindings[16], .'s which showed 83% of primigravida and 17% of multigravida. In our study , 43% were in the 24–30 week gestational range, 23.70% in the 31–36 week range, and 33.33% in the 37–40 week range. and there is also one postnatal case. It changes depending on the mean gestational age of 34 weeks in a research by Mauro et al.[15]. the majority of participants' preferred method of distribution Delivered by LSCS: 42.22%, Instrument Assisted Delivery: 37.03%, Normal Vaginal Birth: 16.30%, Other: 3.70%, and Hysterectomy: 0.74% cases. Studies on the start of pre-eclampsia evaluate different delivery methods because termination is the only effective treatment. Out of a total of 270 deliveries, 222 were live births and 48 were IUD/still births, according to the foetal outcome at the moment of birth. the participant's morbidity was mostly HELLP syndrome with DIVC, which accounted for 50% of cases, followed by HELLP syndrome with AKI (32.5%), pulmonary oedema (12.5%), and intracerebral haemorrhage (5%). 111 live births had newborn complications, of which 66 had severe complications.

**Conclusion**- Seizures pose a substantial risk to maternal, foetal, and neonatal health and are a leading cause of both maternal and neonatal mortality. It needs to be diagnosed and treated right away.

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