

A STUDY OF OUTCOME OF PREGNANCY IN 30 WOMEN WITH EPILEPTIC SEIZURE DISORDERS

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ABSTRACT: OBJECTIVE: To study 1) The effect of seizures on pregnant women. 2) Foetal outcome in women with seizures. 3) The effect of pregnancy on the seizures. **METHODS:** A retrospective study was done from the hospital case records of 30 epileptic pregnant women with seizure disorders (EPWSD), admitted from 1st of July 2012. Seizures due to other causes like eclampsia, cerebro vascular accidents, were excluded. **RESULTS:** A total of 30 patients with EPWSD were studied. Majority belonged to lower socioeconomic status. When epilepsy was under control with adequate use of anti-epileptics, outcome of pregnancy was not adversely affected compared to non-epileptic pregnant women. The rate of induction of labour was not increased in them. Epilepsy was not an indication for Caesarean sections in these women and was mainly for other obstetric indications and the Caesarean section rate was comparable to non-epileptic pregnant women. **CONCLUSIONS:** Pregnancy and child birth in women with epileptic seizure disorders is safe with the availability of anti-epileptics, with good antenatal, intranatal and post natal ultra-modern methods of surveillance and close monitoring of these women. **KEYWORDS:** High-risk pregnancy, neurological disorders in pregnancy, seizures in pregnancy, epilepsy in pregnant women.

INTRODUCTION: Pregnant women with epileptic seizure disorders are grouped under High Risk Pregnancies.

A high-risk pregnancy is that which has a significant probability for a poor maternal or foetal outcome. High-risk pregnancies are a small segment of the obstetrical population that produces the majority of the maternal and infant mortality and morbidity.

Epileptic seizure disorder occurs in one in 200 women of childbearing age and is the most common neurological problem seen by obstetricians in their clinical practice. Most of the literature is contradictory and controversial on the anticonvulsants metabolism, association of birth defects & genetics involved in these women.

It is documented that, the longer a woman has been seizure free, the less likely she will convulse during pregnancy. It is said that, almost all women with an average seizure frequency of more than one per month will worsen during pregnancy.^(1,2) Reduced sleep, especially in the last month of pregnancy may induce seizures even in well controlled patients.⁽³⁾

Pregnancy induces changes in the metabolism of anticonvulsants leading to deterioration in about 50% of patients,⁽⁴⁾ hence the dosage of anti-convulsant drugs need to be readjusted in pregnant women. The incidence of spontaneous abortions is not increased.⁽⁵⁾ It is noted that, foetus suffers bradycardia during and for 20 minutes after a maternal seizure. Rarely, seizures have been indicted in foetal demise and foetal intraventricular haemorrhage. Status epilepticus

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increases maternal death by two folds and there is a 50% chance of foetal wastage. The risk of a certain malformations in the foetus of these women is doubled, and is directly proportional to the number of anticonvulsants used.⁽⁶⁾ Orofacial clefts are most commonly attributed to anti convulsants, especially phenytoin. 1 to 2% risk of neural tube defects is seen in infants exposed in-utero to valproic acid ⁽⁷⁾ which can be detected antenatally by 16 to 18 weeks of pregnancy and termination advised. Foetal anticonvulsant syndrome comprises of cranio-facial dysmorphism, hypoplasia of finger tips and nails, which become less conspicuous as the child grows.

MATERIALS AND METHODS: A retrospective study of 30 pregnant women with neurological seizure disorders was done from the hospital case records at Vani Vilas Hospital (VVH) attached to Bangalore Medical College and Research Institute, Bangalore. Seizures due to causes like eclampsia, cerebral deep vein thrombosis, etc., were excluded. A detailed note was made, of the history of seizures, age of onset of seizures, drugs used prior to and during pregnancy for seizures, frequency of occurrence of seizures prior to and during pregnancy, mode of delivery, foetal outcome of the deliveries and occurrence of any seizures in the post-partum period for up to 48 hours of stay in the hospital.

RESULTS: To get a total of 30 patients, the study period spread for about one and a half years. The incidence of EPWSD was 0.14%. Most women were from low socio economic status group. Grand mal epilepsy was the major disorder noted in these women. 80% (24) of women were on mono drug therapy. Phenobarbital sodium is the most commonly used drug, it is a type D category drug both in USA and Australia. 80% of the women had convulsions in the 2nd trimester. 6.6% of patients had intra partum convulsions and 6.6% had post-partum convulsions. 33.33% (11) had induction of labour. 13.2% (4) of women had Caesarean section. Induction of labour and Caesarean sections were done for other obstetric indications and not for epilepsy. Incidence of prematurity was 23.1%.(7) Low birth weight was seen in 33.33% (10) cases. 1(3.3%) neonate showed cleft lip and palate. 6.6%(2) were still births and 1(3.3%) admission was for intra uterine demise.

CONCLUSION: EPWSD can have near normal pregnancy and outcome. The outcome is better if the pre-pregnancy frequency of seizure is well under control. Status epilepticus is a rare occurrence. With present day gadgets and tests for ante-partum, intra-partum and post-partum surveillance, maternal and foetal morbidity and mortality has been reduced to those of non-epileptic pregnant women. There were no indications for induction of labour or Cesarean section because of seizure disorder in pregnancy. All were because of obstetric indications.

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Age in years	Number of patients (n=30)	Percentage
< 20	03	09.9
21-25	16	52.8
26-30	10	33.0
31-35	01	03.3
Distribution of age		

Booked/Unbooked	Number of patients (n=30)	Percentage (%)
Booked at VVH	02	06.6
Booked outside	11	36.3
Not known	17	56.1
No. of Booked & Unbooked cases		

Socio economic status	Number of patients (n=30)	Percentage (%)
Low	13	42.9
Lower middle	11	36.3
Upper midle	06	19.8
Socio economic status		

Age of onset in years	Number of patients (n=30)	Percentage (%)
< 9	03	09.9
10-15	06	19.8
16-20	16	52.8
21-25	04	13.2
26-30	01	03.3
Age of onset of epilepsy		

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Duration in Years	Number of patients (n=30)	Percentage (%)
01-05	13	42.9
05-10	08	26.4
11-15	06	19.8
> 15	03	09.9
Duration of epilepsy		

GA in weeks	Number of patients (n=30)	Percentage (%)
< 32	02	06.6
32-36	05	16.5
37-40	20	66.0
> 40	03	09.9
Gestational age (GA) in weeks at the time of delivery		

Type of treatment	Number of patients (n=30)	Percentage (%)
No medication	03	09.9
Stopped / Irregular treatment	04	13.2
Mono drug therapy	18	59.4
Multi drug therapy	05	16.5
Type of treatment, Mono or Multi drug therapy		

Drug	Number of patients (n=30)	Percentage (%)
No medication	03	09.9
Monotherapy	18	59.4
1. Phenobarbitone	08	26.4
2. Phenytoin	06	19.8
3. Carbamazepine	03	09.9
4. Levitiracetam	01	03.3
Multi drug therapy	09	29.7
Drugs used		

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