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## EFFECT OF PRECONCEPTION COUNSELLING ON WOMEN WITH EPILEPSY

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### ABSTRACT

Antiepileptic medications (AEDs) have been known to cause detrimental fetal consequences during pregnancy. Because of their epilepsy, one-third of women of reproductive age did not consider having children as they don't get adequate education and access to health care. In this pre experimental study, one group pre and post-test only design was adopted and the data was collected among 23 women with epilepsy (WWE) who attend the neuro clinic at selected hospitals at Chennai. Purposive sampling technique was used to select the study samples. The teaching material about preconception counselling on epilepsy and the tool had been prepared after an extensive literature review which was validated by experts. The study results showed that the prospective mothers did not have adequate knowledge before counselling which is evident by the pre and post-test mean knowledge ( $5.76 \pm 1.19$  and  $13.08 \pm 2.11$ ) respectively. After counselling, the WWE gained adequate knowledge which is significant at  $p < 0.05$ . The study concludes that women are not getting adequate critical information regarding their illness and potential AED treatment side effects, which might have serious consequences on their health and that of their unborn child. Women with epilepsy should be evaluated on a regular basis and given timely information regarding the effects of their treatment and should be given chance to take informed choices about the pregnancy.

### KEYWORDS

Antiepileptic medications, Preconception counselling, Epilepsy and Women with epilepsy.

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### INTRODUCTION

According to population-based studies, epilepsy is present in 0.7% of pregnant women, while registry-based research implies a range of 0.2-0.4 %<sup>1</sup>. As a result, nurses frequently meet pregnant women with epilepsy (WWE) and can help manage these women's pregnancies as well as provide

preconception counselling. Despite the fact that most WWE pregnancy outcomes are positive, epilepsy carries additional risks for the woman and fetus, which includes the potential for teratogenic antiepileptic medicines (AEDs), towards major congenital malformation (MCM) in the fetus and long-term developmental delay<sup>2</sup>.

Besides, the risk of fetal MCM raises with the number of AEDs administered<sup>3-6</sup>. Treatment with valproic acid (VPA) in conjunction with AEDs has been linked to an increased incidence of fetal MCM<sup>7</sup>. Most AEDs appear to have dose-dependent teratogenic effects<sup>8,9</sup>, and multiple investigations have verified this dose dependency in the case of VPA<sup>10</sup>. As a result, switching from VPA to another AED should be explored before to conception, and the lowest possible dose of the latter should be used. Preconception counselling is providing detailed information about pregnancy and delivery in WWE, as well as antenatal management involving the use of the lowest possible dose of the most appropriate AED, avoiding VPA, possibly withdrawing AED before conception, and supplementation with folic acid before and after conception to prevent neural tube defects<sup>11</sup>.

Preconception counselling for WWE has been shown to reduce fetal MCM in children born to WWE who have received AEDs<sup>12</sup>. Although numerous standards suggest that WWE women need to plan their pregnancies, and need to undergo preconception counselling, the implementation of counselling is largely unknown. Hence, this study was undertaken to assess the effect of preconception counselling on WWE.

## **MATERIAL AND METHODS**

In this pre experimental study, one group pre and post-test only design was adopted and the data was collected among 23 WWE who attend the neuro clinic at selected hospitals at Chennai. Purposive sampling technique was used to select the study samples. The teaching material about preconception counselling on epilepsy and the tool had been prepared after an extensive literature review which was validated by six nursing experts and one neurologist. The reliability of the tool was elicited by

test- retest method and  $r = 0.79$ . Before data collection, the purpose of the study was explained to the study samples and their consent was obtained as well as institutional ethical clearance was obtained. Pre-test was conducted by the self-administered questionnaire, followed by preconception counselling on epilepsy, in a comfortable environment. After 14 days, post-test was done and the collected data was analyzed by using both descriptive and inferential statistics.

## **RESULTS AND DISCUSSION**

The present study results show that the WWE had knowledge regarding various aspects such as monotherapy, effect of lower rate of VPA use, folic acid supplementation, maternal or neonatal outcomes of AEDs, Importance of continuing AEDs during pregnancy and need of counselling regarding AEDs in pregnancy. The level of knowledge in the pre and post-test on monotherapy was  $0.81 \pm 0.17$  and  $1.21 \pm 0.21$ , on effect of lower rate of VPA use was  $0.7 \pm 0.19$  and  $1.39 \pm 0.41$ , folic acid supplementation was  $1.23 \pm 0.37$  and  $2.81 \pm 0.44$ , maternal or neonatal outcomes of AEDs was  $1.01 \pm 0.19$  and  $4.17 \pm 0.35$ , importance of continuing AEDs during pregnancy was  $0.91 \pm 0.11$  and  $1.37 \pm 0.26$  and need of counselling regarding AEDs in pregnancy was  $1.04 \pm 0.16$  and  $2.13 \pm 0.44$  respectively (Table No.1). There was a similar finding presented by a study conducted by Crawford, P, Hudson, S. (2003) on understanding the information needs of women with epilepsy at different life stages: results of the 'Ideal World' survey. This study concluded that the women are not obtaining critical information regarding their illness and potential treatment side effects, which might have serious complications for their health and that of their unborn child. Because of their epilepsy, one-third of women of reproductive age (33%) did not consider having children<sup>13</sup>.

The pre-test and post-test knowledge mean score of WWE was 5.7 and 13.08 with mean difference of 7.92 which is significant at  $p < 0.05$  (Table No.2). Similar study findings were reported that after the preconception counselling, the knowledge of WWE improved and concluded that planning a pregnancy for women with epilepsy is linked to better seizure

management during pregnancy and decreased fetal exposure to antiepileptic medicines<sup>14-16</sup>.

The demographic characteristics such as age, family income and educational status of WWE had shown statistically significant association with post-test level of knowledge on preconception counselling on epilepsy at  $p < 0.05$  level ( $\chi^2 = 11.147$ ,  $d.f = 5$ ,  $p = 0.012$ ), ( $\chi^2 = 13.08$ ,  $d.f = 3$ ,  $p = 0.014$ ) and ( $\chi^2 = 6.170$ ,  $d.f = 3$ ,  $p = 0.03$ ). This may be because as the women get older, financially sound and have better educational qualification, they may have better knowledge and access to the health care facilities.

**Table No.1: The level of knowledge of WWE on the aspects of counselling**

S.No	Content of Counselling	Pre-test		Post-test	
		Mean	SD	Mean	SD
1	Monotherapy	0.81	0.17	1.21	0.21
2	Effect of lower rate of VPA use	0.7	0.19	1.39	0.41
3	Folic Acid supplementation	1.23	0.37	2.81	0.44
4	Maternal or neonatal outcomes of AEDs	1.01	0.19	4.17	0.35
5	Importance of continuing ACEs during pregnancy	0.91	0.11	1.37	0.26
6	Need of counselling regarding AEDs in pregnancy	1.04	0.16	2.13	0.44
7	Overall Score	5.76	1.19	13.08	2.11

**Table No.2: Pre-test and post-test knowledge and of WWE**

S.No	Variables	Pre-test		Post-test		Mean difference	't' Value
		Mean	SD	Mean	SD		
1	Knowledge	5.7	1.19	13.08	2.11	7.92	13.67

## CONCLUSION

According to the present study, women are not getting adequate critical information regarding their illness and potential treatment side effects, which might have serious consequences for their health and that of their unborn child. Women with epilepsy should be evaluated on a regular basis and given timely information regarding the effects of their treatment which will enable them to take informed choices about the pregnancy.

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## DECLARATION OF CONFLICTING INTEREST

The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

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