



CROSS-SECTIONAL STUDY OF PSYCHIATRIC MORBIDITY AMONG EPILEPSY PATIENTS

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ABSTRACT Epilepsy is a chronic disorder manifest by recurrent, often erratic seizures which may be disconcerting and troublesome to the normal commotion of daily living. There is scant data on psychiatric morbidities like depression, anxiety, psychosis, quality of life, cognitive decline and sexual dysfunction in people living with seizure from low- and middle-income nations. And in India there is very little data available among psychiatric morbidities and seizure disorders. Irrespective of the socioeconomic states and gender discrepancies all ages of epilepsy patients suffer from psychiatric morbidity. Prevailing family circumstances also do not give much importance for the rising psychiatric morbidity among epilepsy patients. There are huge chances of not addressing their psychiatric issues when they are taking the antiepileptic 's for a long time and drugs being collected by their attenders from a very long distance. When psychiatric issues are not addressed adequately, the morbidity of these patients may increase and this may interfere with the epilepsy treatment adherence. Moreover, both epilepsy and psychiatric comorbidity can have significant negative impact on disability, quality of life and economic productivity, Stigma and suicide. Discrimination of epileptic patients should be urgently addressed in all workplace. Early recognition and treatment of psychiatric morbidities by involving Psychiatrists as a member of the EPILEPSY TEAM may lead to a better outcome.

KEYWORDS : Epilepsy, Psychiatric Morbidity, Depression, Anxiety.

INTRODUCTION

Epilepsy is a chronic disorder manifest by recurrent, often erratic seizures which may be disconcerting and troublesome to the normal commotion of daily living. There is scant data on psychiatric morbidities like depression, anxiety, psychosis, quality of life, cognitive decline and sexual dysfunction in people living with seizure from low- and middle-income nations¹. And in India there is very little data available among psychiatric morbidities and seizure disorders. Irrespective of the socioeconomic states and gender discrepancies all ages of epilepsy patients suffer from psychiatric morbidity. Prevailing family circumstances also do not give much importance for the rising psychiatric morbidity among epilepsy patients.² There are huge chances of not addressing their psychiatric issues when they are taking the antiepileptic 's for a long time and drugs being collected by their attenders from a very long distance. When psychiatric issues are not addressed adequately, the morbidity of these patients may increase and this may interfere with the epilepsy treatment adherence. Moreover, both epilepsy and psychiatric comorbidity can have significant negative impact on disability, quality of life and economic productivity, Stigma and suicide.³ Discrimination of epileptic patients should be urgently addressed in all workplace. Early recognition and treatment of psychiatric morbidities by involving Psychiatrists as a member of the epilepsy team may lead to a better outcome.

We all know that psychiatric morbidity has high prevalence among epilepsy, psychiatric morbidity among epilepsy patients is determined by seizure duration, seizure type, seizure frequency and standard of living. Among seizure types psychiatric morbidity is more common among complex partial seizure.⁴ Quality of life is poor among people with psychiatric morbidity. Prevalence of sexual dysfunction is high among seizure disorder. Cognitive impairment is seen among epilepsy patients. There is no much difference in the prevalence of psychiatric morbidity between male and females. Epilepsy patients with abnormal EEG have more psychiatric morbidity. People with epilepsy are vulnerable to develop depression and people with depression have high risk to develop seizures.

Based on this aim of our study is to study the psychiatric morbidity among epilepsy patients attending epilepsy clinic in neurology department. Thereby to assess the level of psychiatric morbidity such as depression, anxiety, psychosis, cognitive impairment and sexual dysfunction among epilepsy patients.

METHODOLOGY

This study was done as cross-sectional study, study was done for period of six months in department of general medicine in a tertiary care teaching hospital, Male and female patients attending the epilepsy clinic Neurology department, Government Rajaji Hospital, Madurai with a definitive diagnosis of Seizure disorder based on clinical semiology, EEG, and neuroimaging, between 16-50 years of age and who were willing to provide informed consent for the interview and patients whose last duration of seizure was > 7days were including in

the study.

Whereas patients with other co-morbid physical illnesses such as diabetes, hypertension, ischemic heart disease, hypothyroidism-cooperative patients, refusal to participate in the research, refusal to provide informed consent for assessment were excluded from the study.

The following tools were used to evaluate the patients. An Semi structured proforma, M.I.N.I plus, Hamilton rating scale for anxiety (HAM-A), Hamilton rating scale for depression (HAM-D), Brief psychiatric rating scale (BPRS), Mini mental status examination (MMSE), Arizona sexual experience scale (ASEX), World health organization quality of life (WHO QOL). Statistical Design was formulated using the data collected as above. For each of the scales and socio-demographic variables, the central values [arithmetic Mean] and Dispersion tendencies [Standard Deviation] were calculated. In comparison of the data, for categorical variables, Chi square and for numerical variables Student 't' test and ANOVA were used. For knowing the significance of psychopathological attributes correlation matrix were used.

RESULTS

In our study in total of 100 patients it was found that around 24% were from below 26 age group, 51% were from 27 to 37 and the remaining 25 Percent were from above 38 years of age also it was found that 52 % were females and the remaining 48% were males. It was found that majority of the participants for the study group were having an educational qualification of primary grade. Of patients were of housewife 's and un skilled workers. Few were students and unemployed persons. It was observed that majority were married which constituted 77%, un married were 17% and widow/separated constituted 6%. Majority of them formed the lower class which constituted 55% and lower middle which constituted 19%. Based on the type of family from the table 7, it was found that majority of the people who participated in the study design were from nuclear family which was 65% and the remaining were from joint family ie 35%. In our study, it was found that 12% of the patients had positive family history of seizure disorder.

In our study it was found that majority of the participants for the study group were from GTCS which constituted 34% complex partial seizure with secondary generalization were 23%, focal motor seizure with secondary generalization were 17%, complex partial seizure were 14% and others were 12%. it was also found that 56% of epileptic patients had abnormal EEG and the remaining 44% had normal EEG.

It was found that duration of seizure in our study group, the most common was 6-10 years which constituted 37%. The second most common was below 5 years which constituted 24%. And it was found that majority of them had a seizure frequency of 2- 5yrs which constituted 41%. Coming to compliance of drug intake it was found

that 59% had good compliance and 26% patients had average compliance and 15% had poor compliance.

Coming to main part of our study, the psychiatric morbidity, to start with depression it was found that 54% of the epileptic patients had depression and 46% did not have depression. Among the 54% who had depression 25% had mild depression, 17% had moderate depression and 11% had severe depression.

Also it was found that 40% of the epileptic patients had Anxiety and 60% did not have Anxiety among the 40% who had Anxiety 21% had mild Anxiety, 16% had moderate Anxiety and 3% had severe Anxiety. It was also found that 2% of the epileptic patients had psychosis, and 98% did not have psychosis.

In our study group 36% of the epileptic patients had cognitive impairment and 64% did not have cognitive impairment. Among the 36% who had cognitive impairment 29% had mild cognitive impairment, 7% had definite cognitive impairment.

Also 29% had sexual dysfunction and 71% had no sexual dysfunction after screening through Arizona Sexual Experience Scale.

TABLE:1:PREVALENCE OF PSYCHIATRIC MORBIDITY IN SEIZURE DISORDER

Psych Morbid	GT CS	CPS WSG	CPS WSG	FMS W SG	F MS	MY O	FS S	ATO NIC	ASW SG	Total
DEP	14	11	12	9	1	4	0	3	0	54
ANX	12	6	9	8	2	1	0	2	0	40
PSYCHO	0	1	0	0	0	0	0	1	0	2
COG IMP	11	6	5	6	1	4	0	3	0	36
SEX DYS	11	5	6	4	0	1	1	1	0	29

In our study out of 100 samples, 54 had depression, 40 had anxiety, 2 had psychosis 36 had cognitive decline and 29% had sexual dysfunction.

It was observed that the complex partial seizure has highest mean score of 12.29 for depression when compared to other seizure types. It was also observed that the mean score for GTCS was low (7.85), however the observed difference is not statistically significant;

Also patients who had seizures between the duration of 11-15 yrs had the highest mean score for depression ie 10.50, and whose seizure duration was more than 16 years they had a mean score of 9.21 for depression. However the observed difference is not statistically significant. It was also found that those who had a high seizure frequency ie more than 5 and above per year had the highest mean score for depression and those whose seizure frequency was 1 or less than 1 per year had the lowest mean score for depression. The observed difference is statistically significant. Also it was found that those who had abnormal EEG record had high mean scores for depression ie 11.30, whereas those who had normal EEG record had the low mean scores for depression. The observed difference is statistically significance since $P < 0.05$.

The other seizure group which included atonic, myoclonic, focal sensory, focal motor, absence seizure with secondary generalization had the high mean score for anxiety, it was also observed that GTCS had the least mean score for anxiety. However the observed difference is not statistically significance, since the F ratio is not significant at 0.05 level. Also it was observed those who had seizure duration of less than 5 years had high mean score for anxiety, and those who had seizure duration of more than 16 years had the low mean scores for anxiety. However the observed difference is not statistically significant.

From the above data's it was observed that those who had a seizure frequency of more than 5 years had high mean score for anxiety, where as those who had seizure frequency of 1 or < 1/year had low mean score for anxiety. However the observed difference is statistically significant. It was also observed that those who had abnormal EEG record had high mean score for anxiety, whereas low mean anxiety scores were seen among normal EEG patients. However the observed difference is statistically significant since $P < 0.05$.

Also it was observed that the other group of seizure subtypes which included atonic, myoclonic, focal sensory, focal motor, absence seizure with secondary generalization had low mean cognitive scores

signifying cognitive impairment, where as those with complex partial seizure with secondary generalization group had high mean cognitive scores signifying no cognitive dysfunction. However the observed difference is statistically significant, since the F ratio is significant at 0.05 level.

Out of 100 patients 29 had sexual dysfunction, 11% are from GTCS, 6% are from CPSWSG. Respondents from different seizure types do not differ with regard to their sexual dysfunction (chi square 0.027, $P > 0.05$ NS).

DISCUSSION

The study using a cross sectional design examined and estimated the prevalence of psychiatric morbidity and quality of life amongst the epilepsy patients. The sample essentially consisted of males and female aged between 16- 50 years, males formed the majority of the sample which was 52% and remaining 48% were females. Amongst the study group majority were of primary grade literacy profile i.e. 42% and next common was high school ie 27%. Regarding the occupation majority belonged to unskilled group of workers and housewife's which constituted 23%. Regarding marital status 77% of them were married and only 17% of them were unmarried. Majority belonged to lower, upper lower and lower middle socio-economic status. Regarding the type of family in which they were living was nuclear family type which constituted 65% and the remaining 35% was joint family type.

In our hospital the different types of seizure groups have been categorized by our expertise neurologists into a) Focal Seizures b) Focal Seizures with secondary generalization and c) Generalized Seizures. Actually, we have 9 different types of seizure groups and for the sake of statistics we have merged myoclonic, atonic, focal motor, focal sensory and absence with secondary generalization into others. Majority of the participants for the study group were from GTCS which constituted 34% complex partial seizure with secondary generalization were 23%, focal motor seizure with secondary generalization were 17%, complex partial seizure were 14% and others were 12%. 56% of epileptic patients had abnormal EEG and the remaining 44% had normal EEG. For the sake of statistical convenience, the duration of seizure has been grouped into below 5 years, 6-10 years, 11-15 years and 16 years and above. From the study it was found that the most common was 6-10 years which constituted 37%. The second most common was below 5 years which constituted 24%. Seizure frequency was grouped into below 1 per year, 2-5 per year and 5 and above per year. It was found that majority of them had a seizure frequency of 2- 5yrs which constituted 41%.

Depression was the most common psychiatric morbidity among epilepsy patients which constituted 54% next common psychiatric morbidity was anxiety which was 40% cognitive dysfunction was found to be 36% sexual dysfunction around 29% and only 2% had psychosis. Among the depressed individuals 25% had mild depression, 17% had moderate depression, 11% had severe depression and 1% had very severe depression with suicidal wishes. R. Jones et al⁷ the overall prevalence of psychiatric morbidity in epilepsy was found to be Mood disorders 24-75%, anxiety disorders 10-25%, Psychosis 2-7%, Personality disorders 1-2%, So our study fairly correlates with the standard literature.

The prevalence of depression ranged from 10-55% according to the standard literature. Frank G Gilliam., et al.⁶ prevalence of depression 30-50%. Our study findings correlated with the above study findings.

Sabrina Stefanello., et al⁷, prevalence of anxiety of 39.4% these study findings correlated with our study findings in which prevalence of anxiety was 40%. However this finding was contrary to most of the studies including Jose augusto bragatti., et al.⁸ anxiety disorders were 30.7%

Stefansson et al.,⁹ prevalence of schizophrenia like psychosis was higher ie 3% compared to the non-epileptic group of 0.6%, Mendez et al. (1993) prevalence of schizophrenia like psychosis 4.72 %, these study findings correlated with our study findings in which the prevalence of psychosis was 2%.

Thompson., et al.¹⁰ seizure frequency predicts cognitive dysfunction this study finding correlates with our study finding which was statistically significant. In our study cognitive dysfunction prevalence was around 36% these finding correlates with the above study findings.

Kuba R, et al.¹¹ estimates of prevalence of sexual dysfunction ranges between 30-70%. The prevalence of sexual dysfunction was 29% with our study, this fairly correlates with the above-described study findings.

CONCLUSION

From the study, we found that depression is the most common psychiatric morbidity among epilepsy patients followed by anxiety, cognitive dysfunction, sexual dysfunction, and psychosis. Seizure frequency has significant correlation with depression, anxiety, cognitive decline, sexual dysfunction and poor quality of life in patients with epilepsy. Early recognition and treatment of psychiatric morbidities by involving Psychiatrists as a member of the EPILEPSY TEAM may lead to a better outcome.

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