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Prevalence of psychiatric comorbidities among the patients of epilepsy attending general hospital psychiatric unit

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Abstract

Background: Depression is most common psychiatric disorder in patients with epilepsy and it is the significant cause of morbidity.¹ Upto 50-60 percent of patients with epilepsy may develop psychiatric complications, particularly depression, anxiety, and psychotic disorders.² There is growing evidence of biological link between depression and epilepsy, and significant factors involved are the biological amines and gamma amino butyric acid (GABA)³ along with other neurobiological and psychosocial factors. This study assess the symptoms and severity of psychiatric comorbidities in patients diagnosed with epilepsy.

Methods and Findings: This study was conducted on patients attending psychiatric outpatient epilepsy clinic in psychiatry department, government medical college, Amritsar. A total of 40 patients were studied to find out the prevalence and severity of depression by using self applicable questionnaire, Beck depression inventory (BDI),⁴ and MINI, in patients who are diagnosed with epilepsy by clinical interview and examination by senior psychiatrist consultant. In the results of our study 50% patients had psychiatric co-morbidities. 40% had depressive disorder. Depression is found to be more among females in our study. 22.5 % were females and 17.5% were males. Among depressed patients, 22.5% had severe depression. Prevalence of moderate depression was 15% , and 2.5 % had borderline clinical depression, 5% had psychosis, and 5% had substance dependence.

Conclusion: Diagnosing psychiatric co-morbidities can be difficult in patients with epilepsy. The treatment of both epilepsy and depression need for close collaboration. Patient taking antiepileptic medication may have symptoms of depression as a result of their treatment. Sadly, data from drug trials are often helpful. The antiepileptic medications most closely associated with acute depression on initiation of treatment are vigabatrin, phenobarbitone, and topiramate. Depression with topiramate may be due to abrupt cessation of seizures or drug toxicity. Patients starting tiagabine may develop symptoms of agitation, withdrawal, and mood disturbance suggestive of depression;. Thus good awareness and recognition of psychiatric conditions can help a long way in improving the quality of care of patients with epilepsy.

Keywords: Psychiatric comorbidities, epilepsy

Introduction

Epilepsy is a common neuropsychiatric disorder with other psychiatric co-morbidities. Epileptic seizures are clinical symptoms that start abruptly and have a great variability in its presentation. A seizure can present with motor, sensory or autonomic symptoms with or without change in state of consciousness.⁵ Epilepsy can be divided into generalized (when neuronal hyperexcitability originates in both hemispheres) and focal (if there is unilateral onset of neuronal hyperexcitability).^{6,7} despite of extensive literature indicating that depression is frequent psychiatric complication of chronic epilepsy. reports continue to indicate that mood disorders in particular and psychiatric comorbidity more generally continue to be unrecognized or untreated in both children and adults in epilepsy (Jane and John et al). Causes of under-diagnosis and under-treatment of major depression in patients with epilepsy are- 1)patient factors like failure to recognize symptoms, reluctance to seek treatment(e.g, stigma) , underestimation of symptoms and severity, non compliance with treatment, limited access to treatment etc. 2)healthcare system factors like lack of local specialities, inadequate doses or duration of treatment of antidepressant medications etc. prevalence of co-morbidities may directly affect the quality of life in persons with epilepsy. There is increased risk of suicide as compared to general population and this risk is even greater in patients with a history of psychiatric disorder, especially with association between depression and anxiety.⁸ Not all patients who are depressed appear withdrawn. Common complaints such as lack of energy, weight loss, poor concentration or other physical problems can lead to recognition of depression which are mostly ignored in the epilepsy clinic or the patient can be assessed by using a quick questionnaires like B Beck depression inventory(BDI).⁹ There is increasing evidence that both in epilepsy and in mental disorders, change in interaction between serotonergic and noradrenergic neurons with glutaminergic system are associated to abnormal neuronal circuits and hyperexcitability. This hyperexcitability could Evoke both seizure activity and emotional disturbance.¹⁰

Aims and Objectives

1. To study the prevalence of psychiatric co-morbidities in patients with epilepsy.
2. To study the socio-demographic profile of patients with epilepsy with psychiatric co-morbidity.

Methods of study and study population

Study design

This was a cross sectional study. The study was carried out at government medical college, a multispecialty tertiary care teaching hospital at Amritsar, Punjab, India. The study population comprised all patients attending psychiatric outpatient epilepsy clinic. Informed written consent was obtained from the patients prior to study. Total of 40 patients were taken for study who were fulfilling the inclusion and exclusion criteria were selected for study, and were diagnosed as having epilepsy as accordance with international league against epilepsy. These patients were further assessed and were introduced a self applicable questionnaire, Beck depression inventory, M.I.N.I, to find out the presence and severity of depression and other psychiatric co-morbidities.

Inclusion criteria

1. Patients of chronological age of 18 years and older,
2. Patients treated only with anti epileptic drugs and stable on anti epileptic medications for last 30 days.
3. Informed consent.

Exclusion criteria

1. patients undergone brain surgery.
2. mental retardation.

Instruments of the study

1. **Consent form**-this was written in local language understandable to the patient.

2. **Self designed performa-** It included –
 -personal identification data(name, age, sex, religion, father/husband’s name, address of the patient),
 -socio demographic data- enquiring about patient’s education, occupation, marital status, income, type of family.

3. **Beck depression inventory(BDI)-** The BDI was developed in early 1960 to rate depression severity, behavioural and cognitive dimensions of depression.

The BDI was designed to be used by interviewer who called out the item and patient chooses the appropriate answer. This avoided some of the difficulties associated with self rating scales. It could also be used by patients for self rating and now generally is used in this way. It contains 21 items; score 0-3 ,15 items are concerned with psychological symptoms and only six are concerned with somatic illness. Patient is asked to answer each item based on past week.

- 1-10--These ups and downs are considered normal
- 11-16--Mild mood disturbance
- 17-20--Borderline clinical depression
- 21-30--Moderate depression
- 31-40--Severe depression
- >40--Extreme depression

4. **Mini International Neuropsychiatric Interview (MINI)-** is used to assess and track psychiatric diagnoses. The MINI is a structured interview in which patients are asked to answer questions “Yes” or “No”.

Statistical analysis

The data was evaluated using Microsoft excel worksheet and percentage and proportion for each and every variable was calculated.

Results

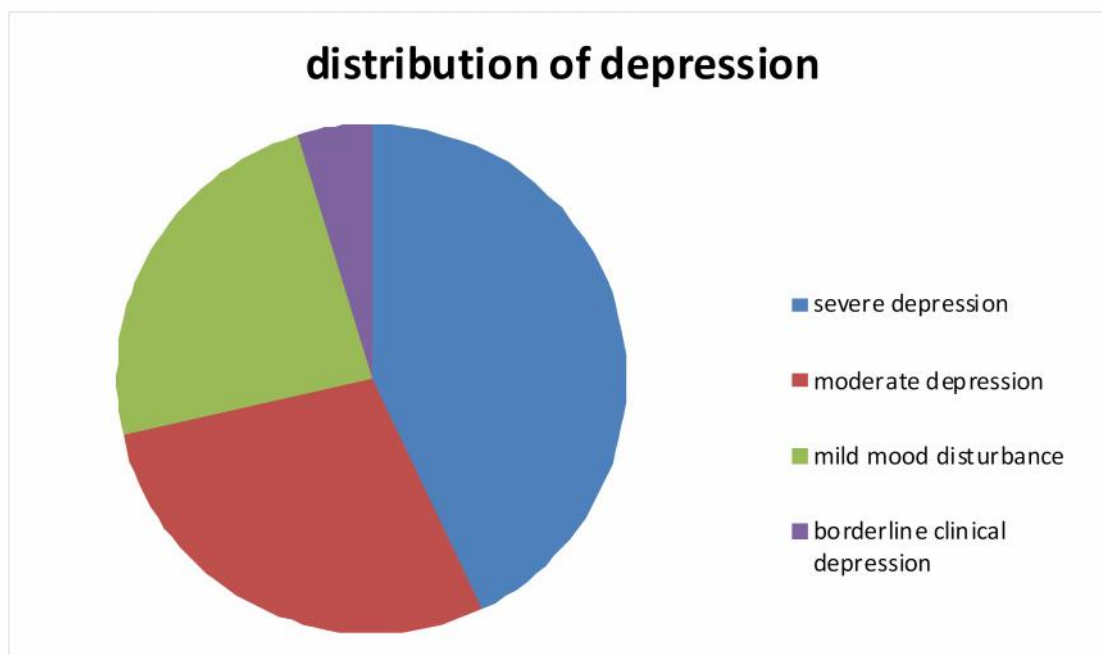
In the present study of 40 patients with epilepsy, majority (25) were males and 15 were female patients. 67.5 % were married, 30% unmarried, 2.5% were widowed. Most of them belong to age group of 18-27 years(42.5%),and 20% belong to 28-37 years of age, similar percentage belong to age group of 38-47 years, 12.5% belong to age group of 48-57 years. 5% belong to age group of more than 58 years.

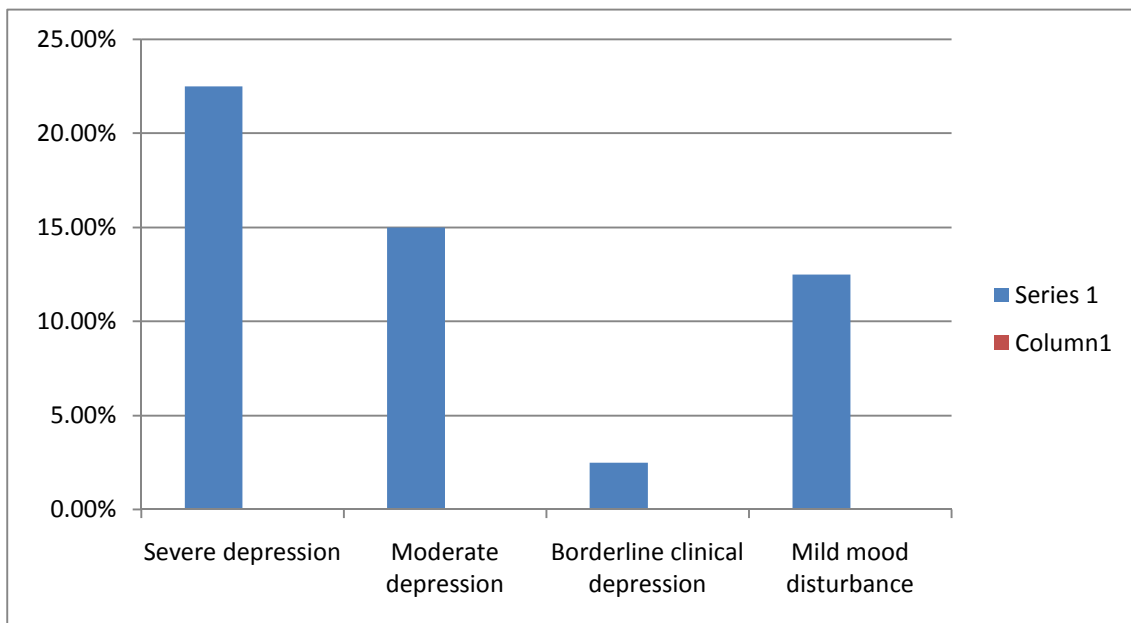
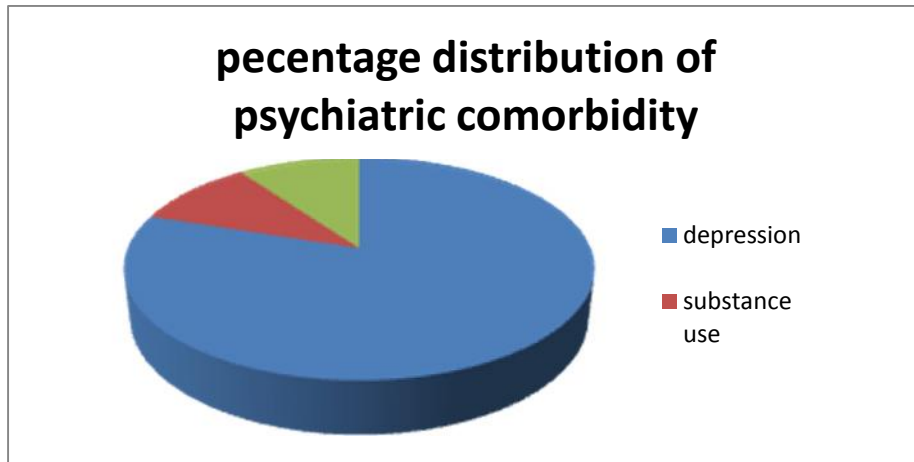
50% patients had psychiatric co-morbidities while 40% had depressive disorder. Depression is found to be more among females in our study. 22.5 % were females and 17.5% were males. Among depressed patients, 22.5% had severe depression. Prevalence of moderate depression was 15%, and 2.5 % had borderline clinical depression, 5% had psychosis, 5% had substance dependence.

Sociodemographic parameters of patients with epilepsy	Percentage of different variables
Age(years)	n(%)
18-27	42.5% (17)
28-37	20%(8)
38-47	20%(8)
48-57	12.5%(5)
>58	5%(2)
Gender	
Male	62.5%(25)
Female	37.5%(15)
Marital status	
Married	67.5%(27)
Unmarried	30%(12)
widowed	2.5%(1)

Education	
Illiterate	22.5%(9)
Middle	20%(8)
Matric	20%(8)
Higher secondary	20%(8)
Graduate	12.5%(5)
occupation	
Housewife	25%(10)
Unemployed	20%(8)
Professional	17.5%(7)
Farmer	15%(6)
Skilled worker	15%(6)
Student	7.5%(3)
Religion	
Sikh	72.5%(29)
Hindu	27.5%(11)
Family type	
Nuclear	60%(24)
Joint	35%(14)
Alone	5%(2)
Region	
Rural	60%(24)
Urban	40%(16)

Distribution of depression	n%
Severe depression	22.5%(9)
Moderate depression	15%(6)
Borderline clinical depression	2.5%(1)
Mild mood disturbance	12.5%(5)





Discussion

The results of this present study show that comorbid psychiatric disorders in epilepsy are affecting 50% of the patients with epilepsy out of which 40% had depression and 5% had psychosis and 5% had alcohol dependence. This is supportive of earlier similar studies.

Bragatti et al showed that 54 % had psychiatric disorders out of whom 42.3% had mood disorders.¹¹

In a study by Edeh and Toone showed that 48% of patients with epilepsy had co-morbid psychiatric disorder.¹²

One study done by Manchanda et al showed that 47.3% patients with epilepsy had psychiatric comorbidity and 4.3 had psychotic disorder.¹³

A study done by Indaco et al using that's depression inventory sure that 50% of the persons with epilepsy had depression.¹⁴

In another study done by Olubunmi A Ogunrin et al, the prevalence of depression in patients of epilepsy using that's depression inventory came out to be 45%.¹⁵

In a study done by Herman et al, patients with epilepsy 46% had mood disorder.¹⁶ in one more study done by Patel et al ,depression is the most prevalent psychiatric comorbidity in epilepsy.²⁰

Conclusion

Most epilepsy clinics are overloaded with referral and the consultation naturally tend to focus on patients seizures and treatment but it is widely important that doctors treating people with epilepsy are able to recognise the symptoms of depression and other psychiatric comorbidity. It is important to be aware of the different types of comorbidities and the various drugs that can optimize or worsen epilepsy and comorbidity management.^{17,18} because depression lowers the quality of life significantly but it is a treatable condition. Failure to recognise depression or inadequate treatment can lead to suicide. The mental health of people with epilepsy is often ignored. An accurate, undistorted understanding of the relation between mental health disorders and epilepsy is essential to ensure appropriate therapy and to avoid unnecessary and potentially harmful treatments and common misconceptions.¹⁹

Limitations

In our study the subjects with epilepsy may not be representative of the epileptic population at large. We have taken a sample of 40 patients. A large sample is required in order to find out the better results.

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