International Journal of Research and Review
Vol.7; Issue: 2; February 2020
Website: www.ijrrjournal.com
Original Research Article *E-ISSN: 2349-9788; P-ISSN: 2454-2237*

Psychiatric Co-Morbidities and Their Association in Epilepsy

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ABSTRACT

Background: Psychiatric co-morbidities are often diagnosed in the patients with epilepsy and results in impairment of quality of life as well hinder with the disease treatment. Their early screening is important to prevent complications.
Aim: Evaluation of psychiatric co-morbidities among epilepsy patients and their relation with demographic variables.
Methods: The diagnosed epileptic patients (age >15 years of either sex) visiting outpatient clinic of Department of Neurology at Indira Gandhi Medical College, Shimla between August 2017 to July 2018 were included in the study. The patients with any other chronic medical illness, neurocognitive disorders, mental retardation, previously diagnosed with psychiatric disorder, refusing to give informed consent, and pregnant women diagnosed with epilepsy were excluded from the study. Diagnosis of psychiatric disorders was made according to International classification of disease-10 (ICD-10).
Results: 30% of the patients in our study had psychiatric co-morbidity. Generalized Anxiety Disorder (GAD) was found in maximum number of patients 8.1% followed by 4.8% patients each with Mixed Anxiety and Depression, Psychosis and Major Depressive Episode. Post-Traumatic Stress Disorder (PTSD) was found in 1.4% and adjustment disorder and panic Disorder were found in 2.4% patients of each disorder. Except male sex, other demographic factors were not associated with psychiatric co-morbidity.
Conclusion: Epileptic patients should be screened for psychiatric co-morbidities in early stage.

Key words: Epilepsy, Psychiatric co-morbidity, ICD-10

BACKGROUND

Patients with epilepsy have an increased risk for cognitive, behavioural, and psychosocial disorders.[1] There is an increased risk for suicide in people with epilepsy, compared to the general population and this risk is even greater in patients with a history of a psychiatric disorder, especially when epilepsy is associated with depression and anxiety.

Psychiatric disorders accompanying epilepsy are co-morbid with epilepsy and may precede, co-occur or follow a diagnosis of epilepsy. The most commonly reported co-morbid psychiatric conditions fall into the category of psychosis, neuroses and mood disorders or personality disorders and behavioural problems. The psychiatric conditions can present either peri-ictally (in prodromal, ictal or postictal periods) or inter-ictally. Higher rates of psychopathology are observed in people with epilepsy compared with the general population, other neurological control groups, and people with chronic non-neurological disorders.[2]

Considering the fact that the prevalence of epilepsy in India is rising, and there is considerable psychiatric co-morbidity in epilepsy patients, the importance of research from our country cannot be overemphasized. Hence, the present study was aimed to evaluate psychiatric co-morbidities among epilepsy patients and their relation with demographic variables.

PATIENTS AND METHODS

The diagnosed epileptic patients (age >15 years of either sex) visiting outpatient clinic of Department of Neurology at Indira Gandhi Medical College, Shimla between Aug 2017 to Jul 2018 were included in the study. The patients with any other chronic medical illness, neuro cognitive disorders, mental retardation, previously diagnosed with psychiatric disorder, refusing to give informed consent, and pregnant women diagnosed with epilepsy were excluded from the study.

Diagnosis of psychiatric disorders

Diagnosis of psychiatric disorders was made according to International classification of disease-10 (ICD-10).[3]

Hamilton Depression Scale (HAM-D)

The Ham-D is the most widely used clinician-administered depression assessment scale. The original version contains 17 items (HAM-D17) pertaining to symptoms of depression experienced over the past week. Although the scale was designed for completion after an unstructured clinical interview, there are now semi-structured interview guides available. A later 21-item version (HAM-D21) included 4 items intended to subtype the depression, but which are sometimes, incorrectly, used to rate severity.[4]

Hamilton Anxiety Rating Scales (HAM-A)

The HAM-A was one of the first rating scales developed to measure the severity of anxiety symptoms, and is still widely used today in both clinical and research settings. The scale consists of 14 items, each defined by a series of symptoms, and measures both psychic anxiety (mental agitation and psychological distress) and somatic anxiety (physical complaints related to anxiety).[5]

Statistical analysis

Data were presented as frequency and percentage. Chi square test with or without Yate's correction was used to measure association between two categorical variables. P value <0.05 was considered significant. Statistical analysis was performed using SPSS v21.

RESULTS

Two-hundred and ten patients were included in the study. Table 1 shows demographic characteristics of the study participants. 63% of the patients aged up to 35 years. Male to female ratio was 2.39:1, 95% patients belonged to rural areas, 27% patients were single or separated, 99% patients were Hindu. Only 16.7% patients were skilled workers. 10.5% were illiterate and majority of the patients belonged to lower middle class.

Table 1: Demographic characteristics of the study participants

	n	%
Age (Years)		
15-35	132	62.9
36-55	72	34.3
>55	6	2.9
Sex		
Male	148	70.5
Female	62	29.5
Residence		
Rural	200	95.2
Urban	10	4.8
Marital Status		
Married	153	72.9
Single or Separated	57	27.1
Religion		
Hindu	208	99
Muslim	2	1
Occupation		
Professional/Skilled	35	16.7
Semiskilled	78	37.1
Homemaker and Student	28	13.3
Unemployed	69	32.9
Education		
Graduate and above	67	31.9
10^{th} to 12^{th}	69	32.9
Under Matriculation	52	24.8
Illiterate	22	10.5
Socioeconomic status		
Upper Middle	84	40
Lower Middle	91	43.3
Lower	19	9.1
Upper	16	7.6

Seizures

77% of the patients in our study had generalized seizures, while remaining 23% patients had focal seizures.

Psychiatric co-morbidities

30% of the patients in our study had psychiatric co-morbidity (Figure 1).Generalized Anxiety Disorder (GAD) was found in maximum number of patients 8.1% followed by 4.8% patients each with Mixed Anxiety and Depression, Psychosis and Major Depressive Episode. Post-Traumatic Stress Disorder (PTSD) was found in 1.4% and adjustment disorder and

panic Disorder were found in 2.4% patients of each disorder (Figure 2).

Table 2: Association of psychiatric co-morbidity with socio-demographic variables.

Variables (n)	Psychiatric Co-morbidity (n)		P Value
	Present	Absent	
Age Group			
15-35	40	92	0.517
36-55	20	52	
56 and above	3	3	
Gender			
Male	30	118	<0.001
Female	33	29	
Locality			
Rural	60	140	1.000
Urban	3	7	
Marital Status			
Single	18	37	0.584
Married	45	108	
Divorced	0	2	
Religion			
Hindu	61	147	0.163
Muslim	02	00	
Occupation			
Professional / Skilled	12	23	
Semiskilled	22	56	0.355
House wife & students	11	17	
Unemployed	18	51	
Education			
Graduate and above	21	46	
10-12th	19	50	0.916
1-10th	17	35	
Illiterate	6	16	
Socioeconomic status			
Upper	1	15	
Upper Middle	26	58	0.086
Lower Middle	32	59	
Lower	4	15	

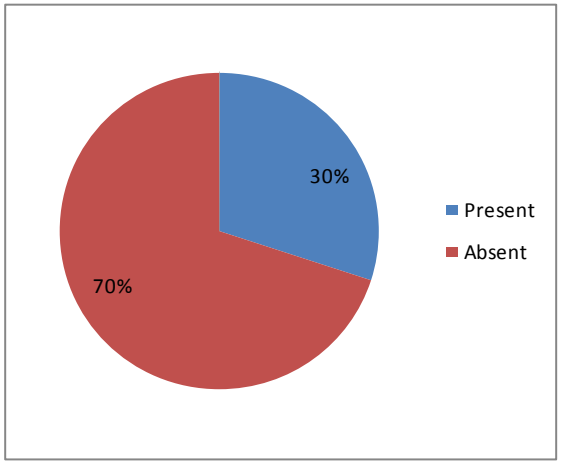

Figure 1: Psychiatric co-morbidity

Association of psychiatric co-morbidities with demographic variables

Table 2 shows association of psychiatric co-morbidities with demographic variables. Our study observed that none of the demographic variables except gender was significantly associated with presence of psychiatric co-morbidities. Male sex was associated with absence of psychiatric co-morbidities (P<0.0001).

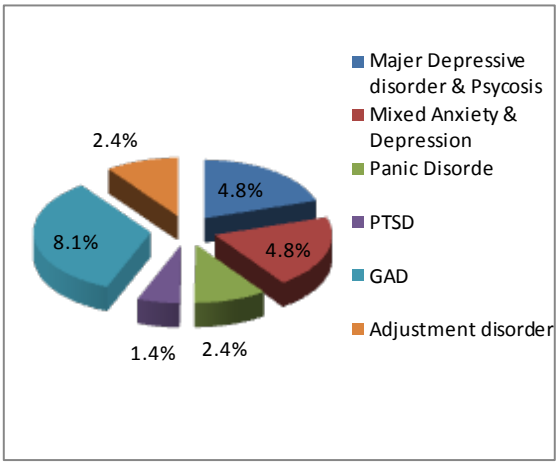

Figure 2: Type of psychiatric co-morbidities

DISCUSSION

A key question regarding psychiatric disorders occurring in patients with epilepsy is whether they are phenomenological comparable to disorders in patients without epilepsy. Opposing views have been proposed, but the subject remains unclear. The answer is important because the presence of recognizable psychiatric syndromes in patients with known brain pathology may lead to an understanding of the pathophysiology of these disorders in patients without epilepsy and specific psychiatric syndromes seen in patients with epilepsy may respond to specific psychiatric treatments.

The prevalence rate of psychiatric diagnoses amongst patients with epilepsy reported in various studies ranged from 5 to 44 %, a variation that can be attributed to differences in sample size, the disease and treatment factor.[6-9] In the present study, 30% patients met ICD-10 criteria for diagnosis. In a much-quoted study, Forsgen L (1992) observed that 39% patients had psychiatric co-morbidity which is almost comparable to our study.[10] Cockerell et al (1996) estimated that 30% had a diagnosis of psychiatric co-morbid disorders.[11] The varied prevalence of psychiatric co-morbidity in this study could be due to different cultural

background and methodology used. In the present study, only male sex was associated with absence of psychiatric co-morbidities.

In conclusion, psychiatric illness in epileptic patients is high. These patients must be screened for psychiatric illness to prevent further long-term complications.

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How to cite this article: Verma K, Chauhan N. Psychiatric co-morbidities and their association in epilepsy. International Journal of Research and Review. 2020; 7(2): 183-186.

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