Original Article

A Study of Anxiety in Epileptic People Attending Out-Patient Department of Psychiatry, Nepal Medical College Teaching Hospital

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Abstract

Background: Epilepsy is the most common chronic neurological disease in the general population and affects approximately 1% of the population in the United States. Anxiety disorders are common comorbidity among patients with epilepsy. Incidence of anxiety was found to be 16.7% in patients with epilepsy. This study has tried to evaluate the anxiety disorder in patients with epilepsy attending outpatient department of Nepal Medical College.

Objective: To estimate the prevalence of anxiety in outpatients with epilepsy and the socio-demographic profiles of patients with epilepsy.

Methods: It is a descriptive cross-sectional study. The sample comprised of 55 outpatients with epilepsy attending Psychiatry department of Nepal Medical College Teaching Hospital. Informed consent was taken and semi- structured proforma was filled with adequate information. Diagnosis was based on ICD-10 DCR and severity was assessed using Hospital Anxiety and Depression Scale (HADS). Data was evaluated with SPSS 16 and appropriate statistical tools were applied.

Results: The study found that a great number of epileptic patients were suffering from comorbid anxiety disorder (36.36%). Also married patients had higher anxiety disorder (57.69%), thus, showed a significant relation based on marital status and anxiety in epileptic patients.

Conclusion: Anxiety disorders are common in people with epilepsy. Increased awareness of the clinical presentations of anxiety disorders should be initiated for securing the mental health and quality of life in people with epilepsy.

Keywords: Anxiety disorder, epilepsy

Introduction

An epileptic seizure has been defined as a 'clinical' manifestation presented to result from an abnormal and excessive discharge of a set of neurons in the brain.[1] Epilepsy is one of the most frequent neurological diseases with a lifelong prevalence of an average of 4-10/1000 and up to 50-60% of patients with epilepsy have various mood disorders including anxiety and depression. The relationship between anxiety, fear, and epilepsy was recognized in antiquity. Hughlings Jackson was one of the first to recognize that fear is part of a seizure itself rather than a reaction to what was about to occur.[2] The Community study in Eastern Nepal yielded prevalence rate of seizure/epilepsy at 1.9%.[3]

According to the Canadian community health survey, the prevalence of anxiety disorders are 22.8% particularly among those with epilepsy.[4] These estimates can increase substantially in specialized clinic settings, and may be as high as 50.0% according to some reports.[5] A study conducted in Eastern Nepal shows mood

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(mainly depression) 23% and anxiety disorders 15% as the most common psychiatric co-morbidities in seizure cases.[6] Untreated anxiety can have adverse effects on epilepsy management and disease prognosis.[7] In one study, patients who experienced <75% reduction in seizure were likely to develop anxiety disorder.[2] Several socio-demographic factors and adverse health behaviors have been associated with increased frequencies of anxiety and anxiety symptoms in the general population[8,9] but these associations are less clear in those with epilepsy.[7,10]

Another study showed, inter-ictal generalized anxiety disorder to be 10-25% and 45% of patients were anxious postictally.[11] Furthermore, the relationship of epilepsy-related factors and anxiety has been inconsistent. The aim of this study was to estimate the prevalence of anxiety and describe associated factors in persons with epilepsy.

Materials and methods

A descriptive cross sectional study was conducted in psychiatry out-patient department of Nepal Medical College Teaching Hospital in the first visit from 13th November 2017 to 12th July 2018. The sample comprised of patients diagnosed as epilepsy with age group between 18 years to 65 years, excluding those who had previously undergone surgery, patients with established diagnosis of mental retardation, dementia or language disorder and those who refused to give informed consent to participate in the study. Informed consent was taken from the patient and confidentiality was maintained. Semi structured proforma was used specifically to record socio-demographic data, presenting complaints and relevant informations. Anxiety disorder was diagnosed with the International Classification of Mental and Behavioral Disorders: Diagnostic Criteria for Research (ICD-10 DCR, WHO, 1992) and severity was assessed using Hospital Anxiety and Depression Scale (HADS). Ethical approval was obtained from NMC Institutional Review Committee (IRC). Data obtained was analyzed with the use of computer programme Statistical Package for the Social Sciences (SPSS) version 16 and appropriate parametric and non- parametric test was used for analysis.

Results

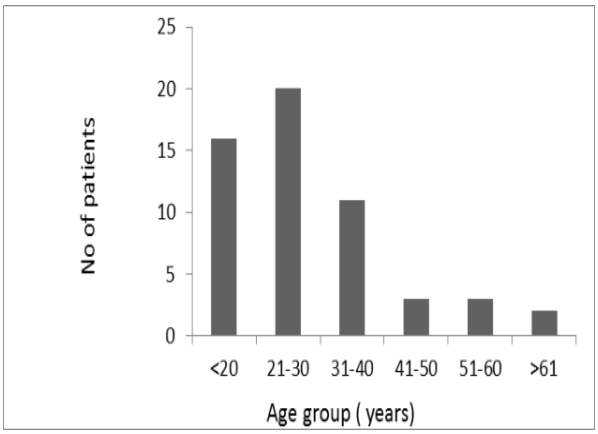

Figure 1: Distribution of patients suffering from epilepsy based on age group

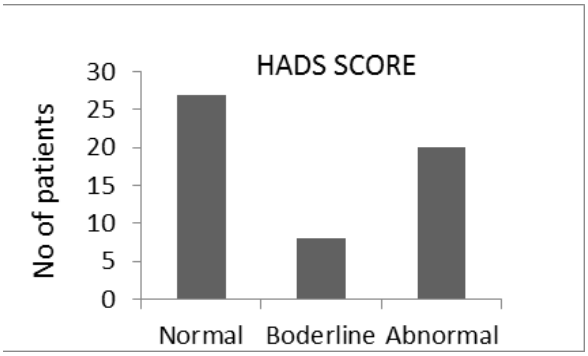

Figure 2: Prevalence of anxiety in patients suffering from epilepsy based on HADS score

Table 1: Distribution of anxiety in patients with epilepsy based on age group

Age Group (Years)	Total No. patients (%)	Anxiety present (%)
≤ 20	16 (29.09)	1 (6.25)
21- 30	20 (36.36)	7 (35.00)
31- 40	11 (20.00)	8 (72.72)
41- 50	3 (5.45)	2 (66.66)
51- 60	3 (5.45)	1 (33.33)
≥ 61	2 (3.63)	1 (50.00)
Total	55 (100.00)	20 (36.36)

Table 2: Distribution of anxiety in patients with epilepsy based on different variables

Variables	Total no patients (%)	Anxiety present (%)	p-value
Address			
Inside valley	36 (65.45)	12 (33.33)	0.7
Outside Valley	19 (34.54)	8 (42.10)	
Sex			
Male	26 (47.27)	12 (46.15)	0.29
Female	29 (52.72)	8 (27.58)	
Education			
Illiterate	7 (12.72)	2 (28.57)	Illiterate Vs Literate 0.23
Primary	21 (38.18)	5 (23.80)	
Secondary	15 (27.27)	5 (33.33)	
Higher secondary	8 (14.54)	4 (50.00)	
University	4 (7.27)	4 (100.00)	
Occupation			
Unemployed	9 (16.36)	2 (22.22)	Unemployed Vs Employed 0.33
Student	23 (41.81)	7 (30.43)	
Teacher	4 (7.27)	4 (100.00)	
Labour	4 (7.27)	2 (50.00)	
Buisness	6 (10.90)	2 (33.33)	
Others	9 (16.36)	3 (33.33)	
Marital Status			
Single	29 (52.72)	5 (17.24)	0.004
Married	26 (47.27)	15 (57.69)	
Caste			
Bhramin	15 (27.27)	7 (46.66)	
Chhetri	6 (10.90)	1 (16.66)	
Janajati	3 (5.45)	0	
Madhesi	31 (56.36)	12 (38.70)	
Religion			
Hindu	38 (69.09)	12 (31.57)	
Buddhist	16 (29.09)	8 (50.00)	
Muslim	1 (1.81)	0	
Alcohol Intake			
Present	17 (30.90)	8 (47.05)	0.54
Absent	38 (69.09)	12 (31.57)	
Seizure Type			
Absence	5 (9.09)	3 (60.00)	0.33
Simple partial	7 (12.72)	2 (28.57)	
Complex partial	12 (21.81)	4 (33.33)	
Generalized tonic-clonic	28 (50.90)	9 (32.14)	
Tonic	1 (1.81)	0	
Clonic	0	0	
Myoclonic	2 (3.63)	2 (100.00)	

As shown in figure 1, majority of the epileptic patients were between age group (21- 30) years, followed by less than 20 years and anxiety disorder was seen among 36.36%. Most of the respondents as shown in figure 2 were normal. Table 1 showed, highest number of the respondents was between age group (21- 30) years but anxiety disorder was present only in 35% while maximum was present among age group (31- 40) years, which was 72.72%. Table 2 showed that large number of the respondents were from inside valley (65.45%) and anxiety disorder among them was 33.33%. Though, male 47.27% and female 52.57% respondents were nearly equal, anxiety disorder was significantly more among males 46.1%. Many of the respondents had primary level education and were students, anxiety disorder was found to be 23.80% and 30.43% respectively among them. Based on marital status, married patients had higher anxiety disorder 57.69% compared to single 17.24%. Numerous respondents were Madhesi 56.36% and Hindu 69.09% among whom anxiety disorder was 38.70% and 31.57% respectively. Lots of patients did not consume alcohol (69.09%) and anxiety disorder among them was 31.57%. Half of the patients had generalized tonic clonic seizure 50.90% followed by complex partial 21.81% among whom anxiety disorder was present in 32.14%

and 33.33% respectively. There was significant relation based on marital status and anxiety disorder in patients with epilepsy.

Discussion

The term 'epilepsy' refers to chronic condition of recurrent or repeated seizures. Rather than being disease, epilepsy is a symptom of disturbance of cerebral function and may be caused by almost any pathological process of acquired or genetic nature involving the brain.[12-3] The steady increase in epilepsy prevalence rates with advancing age that is seen in developed countries; the rates seem to peak in the second decade in resource-poor countries. Although no recent data available regarding disease burden in Nepal, a door to door survey conducted in 823 household revealed prevalence rate of 0.733 for generalized tonic clonic seizures.[14] Despite many methodological problems, the available body of evidence strongly suggests that epilepsy patients have a higher prevalence of anxiety disorders than controls, in both hospital and community samples.[15] In comparison to studies conducted by Tellez-Zenteno JF et al[4] (22.8%), Beyenburg S et al[7] (25%) and based Oh-Young Kwon et al[23] study, the matched longitudinal cohort study based on the UK General Practice Research Database also found the bidirectional association between anxiety and epilepsy.[16] A Canadian population based study found that the lifetime prevalence of anxiety was 2.4 times higher in people with epilepsy (PWE) than in people without epilepsy.[4] Studies conducted in Canada, the UK, and the US have found that the prevalence of anxiety was higher in PWE than in people without epilepsy; specifically, it was 11- 25% in PWE controls in study conducted in Korean tertiary-care hospitals: the rates of anxiety were 15.3% in PWE and 3.2% in healthy controls.[17] The reported rate of comorbid anxiety was higher in patients with drug-resistant epilepsy and patients with Temporal lobe epilepsy (TLE) than in all PWE,[18] and higher in patients with TLE than in patients with primary generalized epilepsy or patients with other chronic diseases.[19] According to studies performed in Canada and the UK,[20-1] the prevalence of anxiety was 11- 44% in people with drug-refractory epilepsy, while a study from Germany found that 19 of 97 consecutive outpatients with drug-resistant epilepsy (19.6%) suffered from anxiety.[22] Furthermore, anxiety was reported in 19% of patients with TLE[23] and in 24.7% of epileptic surgery candidates.[24] The rate of anxiety in Korean survey was higher in patients with uncontrolled epilepsy (31.1%) than in patients with poorly controlled epilepsy (14.3%), patients with well-controlled epilepsy (6.5%), and healthy controls (3.2%).[25] Likewise, prevalence of anxiety disorder among epileptic patients were higher 36.36% in this study. This variation might be because of small sample size and variation in scale used to assess anxiety disorder. Various studies have been done to know the prevalence of anxiety disorder in pre-ictal, ictal, inter-ictal, post ictal phase and temporal lobe epilepsy. Anxiety can increase in the days prior to the seizure, as measured by rating scales, in patients with generalized or partial seizures.[26] Ictal anxiety, presenting as fear, anguish, or apprehension, is a simple partial seizure, most often of temporal lobe origin. Among patients with TLE, fear is an aura in 10- 15% with lateral foci and 15- 20% with medial foci.[27-8] Inter-ictal anxiety presents as feelings of apprehension or as a manifest clinical anxiety disorder, such as panic disorder (PD), generalized anxiety disorder (GAD),

obsessive–compulsive disorder (OCD), or posttraumatic stress disorder (PTSD).[29,30-1] Postictal anxiety can last hours and days after a seizure. According to this study, prevalence of anxiety disorder was highest among patient having absence seizures (60%).

Similarly, no studies have compared various socio-demographic profiles of patients with epilepsy and occurrence of anxiety disorder. This study showed anxiety disorder was higher among patients with epilepsy who were male (46.1%), had primary level education (23.80%), were students (30.43%), married (57.69%), Madhesi (38.70%) and Hindu (31.57%). Study showed significant relation based on marital status.

Conclusion

The prevalence of anxiety was found to be high among epileptic people in this study. Although anxiety symptoms are frequently seen in patients with epilepsy, their recognition and treatment remain suboptimal. Increased awareness of the clinical presentations of anxiety disorders may help clinicians provide improved, comprehensive treatments to their patients, thus, improving overall outcomes and quality of life in people with epilepsy.

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