Original Article

Prevalence of depression in Patients with Epilepsy: A study from Tribhuvan University- Teaching Hospital.

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Abstract

Background: *Epilepsy is often associated with mental and behavioral problems. Depression is one of the commonest psychiatric comorbidity among patients suffering from epilepsy leading to poorer seizure control and adversely affecting their quality of life. The objectives of this study were to know the prevalence of depression among patients with epilepsy and to see for any association with demographic and clinical variables.*

Method: *A cross sectional study was carried out in patients with epilepsy attending psychiatry outpatient department in a tertiary care hospital, Tribhuvan University-Teaching Hospital (TUTH). All consecutive patients with epilepsy meeting inclusion and exclusion criteria were involved in the study after obtaining informed consent. Depression was diagnosed using semi structured proforma and ICD-10 DCR criteria. Data was analyzed using SPSS version 16 and analysis carried out using descriptive statistics.*

Results: *Out of total 68 patients, 58.8% were male. About 54.4% of subjects were single and 26.5%were students. Out of the total subject, 79.4% were from rural areas. About 37%cases were having depression at the time of the interview. Male gender, younger age, having generalized epilepsy was more associated with depression.*

Conclusion: *Depression was found to be highly prevalent psychiatric co- morbidity among the patients with epilepsy. Patients of younger age group, men and having generalized epilepsy were more prone to have depression. The study emphasized need for proper psychiatric evaluation for overall management of patients with epilepsy.*

Key words: Epilepsy, depression, co -morbidity

INTRODUCTION

Worldwide epilepsy affects 50 million people and 80 % of them live in the developing countries. [1,2] Although we do not have our own data in Nepal, a study of Morang district based on a house to house survey of 823 households covering 4630 people revealed prevalence of epilepsy to be 7.3 per 1000 population.[3]

Epilepsy being one of the major encounters in psychiatry as well as neurology clinics, our aim is usually directed towards the management of seizure. However less attention is paid to the co-morbidities associated with this condition. Genetics play an important role in causation of depression in epileptic patients .[4] Along with genetic loading, studies have shown some specific causes of depression in individuals with epilepsy. They are social stigmatization ,discrimination, restriction in activities in daily life along with biological abnormalities in synthesis of noradrenaline, dopamine, 5-hydroxytriptamine and Gama Amino Butyric Acid(GABA).[5] Studies show higher prevalence of psychiatric co-morbidities in patients with epilepsy than other chronic illnesses. Among them depression is one of the most frequently

occurring conditions. Studies have suggested that depression in many epilepsy cases remains unnoticed in the absence of proper history taking and mental state examination. In many untreated or treatment resistant cases of epilepsy, it has been seen that depression, but not seizure frequency, predicts quality of life of patients.[6] Without addressing this problem, seizure control with medication alone will not be able to improve the overall life of epileptic patient. Prevention of serious consequences like suicide which is five times higher than in general population also requires identification and management of depression before it is too late.[7]

The present study is an attempt to establish association of depression in patients with epilepsy. Though this comparatively small study may not represent the actual scenario in whole community, it throws some light into the problem in a tertiary care centre and would certainly draw attention of medical community on the issue.

METHODOLOGY

This is a cross sectional descriptive study of patients attending the psychiatry Out-Patient Department (OPD) in Tribhuvan University Teaching Hospital (TUTH). The study was carried out between December 2010 to June 2011.The subjects include randomly selected 68 patients who attended the psychiatry OPD for the first time with the diagnosis of epilepsy. The sample was selected according to inclusion and exclusion criteria. A semi structured proforma was developed and used to record the sociodemographic variables and the psychiatric diagnosis was made according to ICD-10 (DCR) criteria. Data analysis was done using SPSS version 16.

RESULT

The study shows that the maximum number (64.7%) of the patients falls under the younger population group below 25 years. In terms of sex, 58.8 % of the patients are male. Majority of the patients were from rural area which is 79.4%. Around 54.4 % patients were single, 3.8 % were Hindus and rest were Buddhists. Socioeconomically, 75 % were from middle class whereas 22.1 % were from lower class. 2.9 % were from upper class family.

Regarding the seizure types, 60(88. 2 %) patients were having generalized seizure, 7 (10.3 %) cases were having partial seizure with secondary generalization whereas only one case 1.5 % was having complex partial seizure.

Among the total of 68 respondents 25(36.8%) patients were found to be suffering from depression. Among the depressive cases, 10(14.7 %) patients were having moderate depression with somatic syndrome and 7 (10.3 %) cases were having moderate depression without somatic syndrome. Mild depression with somatic syndrome was found in 3 (4.4%) cases and mild depression without somatic syndrome was found in 4(5.9%) cases. Only one (1.5%) case of severe depression (without psychotic symptom) was found in the study.

Among the depressive patients, 16(64 %) were male and 9(36 %) were female. Regarding the seizure duration and epilepsy, 12 (48 %) and epilepsy, 12 (48 %) cases were having epilepsy of 1-5 years duration, 6(24 %) cases were found in the respondents having seizure for 5-10 years . Five (20 %) cases were found in the group 10-15 years of seizure and 2(8 %) cases were found in the group 15 -20 years of seizure.

DISCUSSION

Because of lack of awareness, deeply rooted traditional healing practices and treatment gap, epilepsy in Nepal remains a big challenge.[8] The present study showed that 36.8% cases among respondents with epilepsy were suffering from depression. Similar studies conducted elsewhere have been published with different results. Eden, 1987 found 4-37% of depression among whole population[9]. Ettingh, 2004 estimated the prevalence of depression as 17-21%among patients with epilepsy[10]. The difference in occurrence of depression comes in a wide range depending upon clinical settings, geographical area and study type. Patten SB, 2005 found prevalence between 13-18 % [11] while Kumar AM, 2002 found it to be 20-25 %[12]. Community based population studies of epilepsy report rates of depression from 9-22 %, while

hospital based samples reported higher rates of depression (27-58%) for the patients with epilepsy.[13]

Though no information about similar other studies carried out in Nepal is available at present, a hospital based study done in Pakistan also found significant proportion of epilepsy cases to be depressed. Aziz_ur Rehman and Yousaf Zai, 2009 found 60 % depression among epileptics in favor of this study [14]. In the present study, mild depression without somatic syndrome was found in 5.9 % cases and same with somatic syndrome was found in 4.4 % of cases contributing about 10 % of mild depression which is very low as compared to 65.2 % revealed by study conducted by S. Nidhinandana [15]. Moderate depression constituted 25 % (without somatic syndrome: 10.3 % and with somatic syndrome 14.7 %) which is somehow comparable with 34.8 %, a result of same study in Thailand, in which no case of severe depression was reported while present study reports severe depression (without psychotic symptoms) to be 1.5 %.

Looking at the age wise distribution of depressive illness, group between 18 – 25 years constitute maximum number 18 (72%) among 25 depressive cases. Seven cases fall on the age group 25-35 years which correlates the overall higher prevalence of depression in this age group worldwide. Depression is found to be co morbidly present in higher proportion in male than female population in the study which can be explained by the proportion of occurrence of epilepsy in male over female worldwide which is also supported by the findings of the study in Pakistan which revealed 55% male and 45% female .[16]

Regarding the relationship between the seizure disorder and depression, majority of depression i.e. 48% fall in the duration of 1-5 years of epilepsy followed by 5-10 years. No depression was found in patients having seizure for more than 20 years. Although this small study cannot be generalized, no relationship could be established between the duration of seizure disorder and depression which is also supported by the study carried out Alsthuler.[17]

Generalized epilepsy has the highest number of depressive patients which is 24 out of 25. Rest one is found in partial seizure with secondary generalization. A large study conducted comprising 150 patients with localization related epilepsy and 70 patients with idiopathic generalized epilepsy found higher incidence of depression and anxiety in the former group, [18] which does not correspond to the present study. The cause could be the relatively small sample size and disproportionate presentation to the tertiary centre located in urban area which does not represent the cases in larger geographical area.

CONCLUSIONS AND RECOMMENDATIONS

Epilepsy is not only a disease entity, but also equally associated with much psychiatric co-morbidity. Among them depression is one of the most important disorder. The present findings suggest that substantial proportion of epilepsy patients attending outpatient clinic of tertiary care hospital of Nepal suffer from depressive disorder. Prevalence of Depression among patient with epilepsy is found to be about 37 %. As with the epilepsy type, the type of depression is also associated with factors like age group, geographical location, socioeconomic status, educational attainment, and other psychiatric and medical co-morbidities.

In a country where epilepsy itself is a social stigma, these conditions become more stigmatous when associated with depression. Also, depression remains unrecognized and untreated in large number of patients with epilepsy. Unless co-morbid depression is treated, the management remains incomplete leading to poor quality of life and risk of adverse consequences like suicide. The importance of proper history taking and mental state examination along with clinical examination and investigation in a patient with symptoms suggestive of seizure disorder can hardly be exaggerated. As the patients with epilepsy often present to psychiatry as well as medical OPD, other treating physicians are also equally responsible to recognize depression in epilepsy cases as are psychiatrists.

Because of the limitation of the small case number in this study, the findings may not be generalizable for entire population. However this small endeavor

emphasizes the need of large scale studies to establish the casual relationship of epilepsy with depression.

REFERENCES

1. *Elliot John et al. Epilepsy and Behaviour,Dept. of Neurology, Ohio State University,USA; 12 (2008): 547-56.*
2. *Robert A Scott. The treatment of Epilepsy in Developing Countries. Bulletin of the World Health Organization;2001: 79-84 .*
3. *Nepal MK, Sharma VD, Shrestha PM: Epilepsy Prevalence, A case Study. EPICADEC And Dept. of Psychiatry, IOM, Kathmandu,1996: 17-23.*
4. *Epilepsy and Depression; Retrived June 18, 2003, from Epilepsy Toronto; http://www.epilepsytoronto.org /vol 9-4.html*
5. *Lowe Alan. The Impact of Depression in Epilepsy. Lumina: 21 (1):10-12.*
6. Bremner J.D., Narayan M., Anderson E.R. *Depression in Epilepsy: Mechanisms and Therapeutic Approach, Neurology 2004, 62:258-261.*
7. *Verrotti Alberto.Epilepsy and Suicide: pathogenesis, risk factors, and prevention, Neuropsychiatric Disease and Treatment, 2008; 4(2) : 365-370*
8. *Rajbhandari KC . Clinical profile of epilepsy in tertary care hospital of Nepal.Neurological Journal of South East Asia. 2003;8:1-4*
9. *Eden . Neuro psychiatric symptoms in temporoloimbic lobe on The Neuropsychiatry of Limbic and Subcortical Disorders edited by Stephen Salloway, Paul Malloy, Jeffrey L. Cummings; American psychiatric publishing inc. 2008 :123-33.*
10. *Ettingh. Depression and comorbidity in community-based patients with epilepsy or asthma.Neurology, 2004 : 63 (6) 1008-1014.*
11. *Patten. Psychiatric Co-morbidity in Epilepsy: A population based analysis. Epilepsia 2007;48:2336-44.*
12. *Andres M. Kanner. Hippocampal Atrophy: Another Common Pathogenic Mechanism of Depressive Disorders and Epilepsy; Epilepsy Curr. 2011 Sep-Oct; 11(5): 149–150*
13. *Roy A.Comorbidity in psychiatric disorders in epilepsy., Journal of Medical Association, Thailand. 2007,5(10):123-25.*
14. *Aziz-ur-Rehman Yousafzai. Frequency of Depression in Epilepsy: A Hospital Based Study. J.Ayub Med coll Abbottabad 2009; 21(2).*
15. *Samart Nidhinandana. Prevalence of Depression among Epileptic patients at Pharmongkutlao Hospital. J. Med. Assoc. Thai 2007; 90 (1): 32-6.*
16. *Rizna Taz.Depression and anxiety in epilepsy. J Ayub Med Coll. Abottabad 2009.4(2):245-50.*
17. *Altshuler L. Temporal lobe epilepsy, temporal lobectomy, and major depression. Neuropsychiatry Clin Neurosci , 1999;11: 436-43.*
18. *Piazzini and Canger, Psychiatric comorbidities in epilepsy. Epilepsia.2001;42: 29-31.*