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TO DETERMINE THE FREQUENCY OF DEPRESSION IN PATIENTS WITH PRIMARY EPILEPSY

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ABSTRACT

Introduction: Depression is well known common co-morbid psychiatric condition associated with primary epilepsy. This study showed that frequency of depression was 62% in primary epilepsy patient presenting to the Neurology outpatient clinic of a tertiary care hospital. Female gender, high seizures frequency, polytherapy with AEDs and long duration of primary epilepsy were found to be the factors leading to frequent occurrence of depression in primary epilepsy patients **Objective**: To determine the frequency of depression in patients with primary epilepsy presenting to the Neurology outpatient clinic of Aga Khan University Hospital Karachi.**Study Design**: Cross-sectional study. **Study Setting**: Neurology outpatient department at Aga Khan University Hospital, Karachi. **Duration of study**: 02.11.2009 to 25.08.2010 **Patients and Methods**: A total of one hundred cases of primary epilepsy patients were enrolled in the study, after informed consent. They were asked to complete the Beck depression inventory while waiting in the neurology outpatient clinic. Patients score more than 9 were diagnosed as depression. Results were analyzed on SPSS version 17.**Results**: Out of hundred patients 46 (46%) and 54(54%) were male and females respectively. The mean age of the patients was 32.1±14.03. The frequency of depression was found to be (62 %) in primary epilepsy patient. **Conclusions**: The frequency of depression was found to be very high.

Key Words: Primary Epilepsy Depression Icteral depression Posticteral Depression

INTRODUCTION

Among the 50 million people with epilepsy (PWE) worldwide, ~15 to 60% also likely suffer from depression and/or anxiety disorders, and 80% reside in low-income regions where these comorbidities are often under recognized and undertreated[1, 2]. The last decade has witnessed a significant shift on our understanding of the relation ship between psychiatric disorders and epilepsy. While traditionally psychiatric disorders were considered as a complication of the underlying seizure disorder, new epidemiologic data, supported by clinical and experimental research, have suggested the existence of a bidirectional relation between the two types of conditions: not only are patients with epilepsy at greater risk of experiencing a psychiatric disorder, but patients with primary psychiatric disorders are at greater risk of developing epilepsy[3]. Depression is the most frequent psychiatric comorbidity in people with epilepsy (PWE) with lifetime prevalence rates ranging between 30 and 35%[2]. Epilepsy can be associated with profound physical, social and psychological consequences and it has an impact on a person's quality of life[4]. Depressive syndromes represent a common and often characteristic feature in a number of neurological disorders [5]. Psychiatric disorders (PDs) in neurology are more frequent then it verified in routine exam, not only in the less developed but also in large and very developed neurological departments[6]. In many neurological diseases a depressive syndrome is a characteristic sign of the primary disease or is an important comorbidity[7]. People with epilepsy have a high risk of developing depressive disorders, and people with primary depressive disorders have a high risk of developing epilepsy. Furthermore, a lifetime history of depressive disorders has been associated with a poor response of the seizure disorder to pharmacotherapy and epilepsy surgery[8]. The under diagnosis and under treatment of depressive disorders among epileptic patients represent a problem of considerable magnitude[9].

METHODS

This Study was conducted in Neurology outpatient department at Aga Khan University Hospital, Karachi. It was a Cross-sectional study conducted over nine months. A total of one hundred cases of primary epilepsy patients were enrolled in the study by non-probability purposive sampling. Informed consent from all patients

in out patients department. The following patients were included in the study: Patients of primary epilepsy above 15 years of age with duration of epilepsy greater than 1 year. Both genders were included. Either gender. The following patients were excluded from the study: Diagnosed cases of depression and on antidepressants prior to development of epilepsy: Patients in whom the diagnosis of primary epilepsy was in doubt: Patients of Parkinson disease, multiple sclerosis, dementia, stroke, mental retardation, Alzheimer disease, Cancer, Human immunodeficiency virus infection, diabetes mellitus, chronic hepatitis on Interferon therapy, hypothyroidism, Cushing syndrome. Patients were given Questionnaire with Beck depression inventory while waiting in the neurology outpatient clinic. They were requested to read each item carefully prior to encircling the numbers [0, 1, 2 or 3]. The assigned questionnaire was collected with the demographic data of age and gender besides duration and types of the seizures, anti-epileptic drugs and the frequency of seizures. Questionnaire was taken back after 25 minutes. The numbers encircled were summed up after the patient's completion of questionnaire. Patients who scored more than 9 were diagnosed as depression. Data was analyzed using Statistical Package for Social Sciences (SPSS) version 17. Mean ± standard deviations were calculated for continuous variables (e.g; age, duration of epilepsy). Frequencies and percentages were calculated for gender, type of seizures, type of AED therapy, number of attacks of seizures per year and depression in the epileptic patients. Stratification was done with regard to gander, type of seizures and type of AED therapy.

RESULTS

Out of the 100 patients, 46(46%) were male and 54(54%) were female. The mean age of the patients was 32.1±14.03. The frequency of depression was found to be (62 %) in primary epilepsy patients. The types of seizures in our primary epilepsy patients were generalized seizures and partial seizures (i.e.; either complex partial seizures or secondarily generalized partial seizures) in 62(62%) and 38(38%) respectively. For the treatment of their primary epilepsy, 47(47%) and 53(53%) of patients were receiving AEDs as monotherapy and polytherapy respectively. Numbers of attacks of seizures per year were 0-10, 11-20 and 21-25 in 50(50%), 22(22%) and 28(28%) patients respectively. The mean duration of epilepsy of the patients was 12.9±09.06.Gender-wise frequency of depression in primary epileptic patients was found to be 25 (40.3%) and 37(59.7%) in male and female respectively. Frequency of depression in primary epilepsy patients with respect to the type of seizures was found to be 24 (38.7%) and 38 (61.3%) in those with partial seizures and generalized seizures respectively. Frequency distribution of depression with respect to AED therapy in-patient was found to be 12(19.4%) and 50(80.6%) in those on monotherapy and polytherapy respectively. Frequency distribution of depression in epilepsy patient with respect to numbers of seizure attacks per year in this study was found to be 13 (21.0%), 21 (33.9%) and 28 (45.0%) in those with 0-10, 11-20 and 21-25 attacks of seizures per year respectively.

DISCUSSION

The proportion of males in our study was less as compared to similar studies conducted in Africa [10]. Whether this represents a racial difference is yet to be determined. Similarly the frequency of depression in primary epilepsy patients was significantly higher then found in studies from Casablanca (18.5%)[9]. However in Zambian study it was found to be higher (73%)then in our study[11]. In another study by Mensah it was 11.2%(12). Struss data suggest that male subjects, but not female subjects, with left-sided foci may be particularly vulnerable to depression[13]. Sulijic and colleagues found that patients with generalized convulsive seizures were more likely to be given monotherapy, while patients with partial complex seizures were more likely to be on polytherapy. Furthermore symptoms of moderate and

Table-1: Gender wise frequency of depression in epilepsy n=100

Gender	Depression +ve	Depression -ve
Male	25 (40.3%)	21(55.3%)
Female	37(59.7%)	17(44.7%)
Total Number (%)	62(100%)	38(100%)

severe depression were registered in 33% patients treated with monotherapy and 60% of patients treated with polytherapy[14].This is similar to what we found in our study. However, complex partial seizures, especially of temporal lobe origin, appear to be etiologic factors, particularly in men with left-sided foci. Depression is also more common in patients treated with polytherapy especially with barbiturates, phenytoin, and vigabatrin. Depression has also been described de novo after temporal lobectomy[15]. This is also consistent with our study. It has been found that patients undergoing right hemispheric epilepsy surgery, especially those with high presurgical depression-related morbidity, may be particularly susceptible to clinical depression [16]. It has been consistently reported in the literature that complex partial seizures or simple partial and complex ones are seen more often in patients with depression [17]. In Thailand the prevalence of depression among epileptic patients was 38.3%, divided between mild (65.2%) and moderate (34.8%). There were no significant risk factors correlated with depression[18]. In Iran the prevalence of epilepsy was 1.8%. Epilepsy was more common in females, unemployed and higher educational level. It was not significantly associated with the age group, marital status and residential areas. The most common psychiatric disorders in subjects with epilepsy were major depressive disorder and obsessive-compulsive disorder (19). Yousufzai et al concluded that depression was found to be highly prevalent psychiatric morbidity in epileptic patients and men, married status, uncontrolled epilepsy and low socioeconomic group more prone to have depression[20]. Collaboration between epileptologists and psychiatrists is often sparse, despite the intimate relationship between psychiatric comorbidities and epilepsy[21]. Depressive symptomatology is a frequent co-morbidity in our tertiary care population of PWE. However, suicidal ideation is less common in contrast to persons with major depression[22].

CONCLUSION

Keeping in view the high prevalence of clinical depression in epileptic patients, every patient with epilepsy must be looked for depressive disorder and treated.

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Author's Contribution:

Dr. Wazir Akber: Study concept and design, protocol writing, data collection, data analysis, manuscript writing, manuscript review

Dr. Noor Khosa: Study concept and design, protocol writing, data collection, data analysis, manuscript writing, manuscript review

Dr. Amanullah Sarangzai: Data collection, data analysis, manuscript writing, manuscript review