



Prevalence of Depression among Epilepsy Patients in a Tertiary Care Hospital of North-East Region

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Abstract

Introduction: *Epilepsy describes a condition in which a person has recurrent seizures due to chronic, underlying process. The definition implies that a person with a single seizure or recurrent seizures due to correctable or avoidable circumstances does not necessarily have epilepsy. Using the definition of epilepsy as two or more unprovoked seizures, the incidence of epilepsy is approximately 0.3 – 0.5 % in different populations throughout the world and the prevalence of epilepsy has been estimated at 5 – 10 persons per 1000⁽¹⁾. Epilepsy is a common neurological disorder that affects populations worldwide and leads to severe personal, familial and social impact.*

The word epilepsy is derived from Greek and means to “seize upon” or “taking hold of”. Epilepsy describes a condition in which a person has a tendency for recurrent, usually unprovoked seizures due to chronic, underlying process. One of the first descriptions of epileptic seizures can be traced back to 2000 years in ancient texts from Mesopotamia. Hippocrates studied the disease and disputed its divine origin in his classic treatise On The Sacred Disease.

Aim of the Study: *This study aims to find out the prevalence of depression among epilepsy patients in a tertiary care hospital of north-east region.*

Materials and Methods: *It was cross sectional study done on 100 patients attended to psychiatry OPD and referred from medicine OPD / IPD of AGMC & GBP Hospital, Agartala between January 2016 to December 2016.*

Result: *Out of these 100 epilepsy patient in the age group of 12 to 60 years shows 50 % were having depression. Moreover out of these 100 patients 29% had mild depression, 13% had moderate depression and 8% had severe depression. Most of the study subjects have the epilepsy since their ages between 12 to 28 years (39%) followed by 29 to 44 years (37%)*

Most important this study shows out of these 100 patients male (54%) followed by female (46%). Surprisingly out of these 100 patients 37% were from upper middle class, 8% from lower middle class followed by 13% from upper lower class and 5% from upper class. Moreover 59% patients were married followed by unmarried 41%.

This study also reflect that 65% patients come from nuclear family followed by 35% from joint family. Ultimately the result of the study conclude that 41% patients had generalised tonic clonic seizure followed by followed by complex partial seizure (26 %) and absence seizure (24%). Simple partial seizure is 5% and

partial seizure with secondary generalization is 4% and out of these 100 epileptic patient depression persist in 50 patient and among these 50 patients. Among 50 patients, depression in generalized tonic clonic seizure (20) is more than complex partial seizure (18) followed by absence seizure (7).

Discussion: *In this study, data analysis revealed that the prevalence of depression among epileptic patients was 50% of all 100 epileptic subjects, divided between 29% have mild depression, 13% have moderate depression, and 8% have severe depression. The prevalence of depression among epileptic patients is variable in the previous studies, from as low as (9.5%) as shown in the study of Pooya & Sperlin⁽⁴⁷⁾, to as high as (61%) as shown in the study of Yousafzai et al.⁽⁴⁴⁾*

In my study finding about 50% of our patients had depression, in spite of high prevalence in comparison with some previous studies. Differences of the prevalence of depression may be because of methodological differences and may be due to associated socio-economic factors in our society.

Introduction

Epilepsy describes a condition in which a person has recurrent seizures due to chronic, underlying process. The definition implies that a person with a single seizure or recurrent seizures due to correctable or avoidable circumstances does not necessarily have epilepsy. Using the definition of epilepsy as two or more unprovoked seizures, the incidence of epilepsy is approximately 0.3 – 0.5 % in different populations throughout the world and the prevalence of epilepsy has been estimated at 5 – 10 persons per 1000⁽¹⁾. Epilepsy is a common neurological disorder that affects populations worldwide and leads to severe personal, familial and social impact.

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Aim of the Study

This study aims to find out the prevalence of depression among epilepsy patients in a tertiary care hospital of north-east region.

Materials and Method

It was cross sectional study done on 100 patients attended to psychiatry OPD and referred from medicine OPD / IPD of AGMC & GBP Hospital,

Agartala between January 2016 to December 2016.

Inclusion Criteria

- Who have given informed consent for this study.
- All types of epilepsy cases between the age group of 12 years to 60 years irrespective of sex and socio-demographic status.
- Cases must have confirmed diagnosis of epilepsy for at least six months.

Exclusion Criteria

- Patients who have not given informed consent.
- Patient's age below 12 years and age above 60 years.
- Patients suffering from any other medical condition during the last one month period before interview were excluded from the study.
- Patients with severe mental retardation.
- Patients with history of alcohol or other substance abuse.
- Patients with status epilepticus.
- Patients having history of mood disorders prior to the onset of epilepsy.

Assessment Tools

- Epilepsy diagnostic criteria
- Socio-demographic variables
- Epilepsy related variables
- ICD-10 criteria for diagnosis of depressive disorder
- BDI (Beck Depression Inventory) scale

Analysis of Data

The data were analysed by using SPSS-15. Cross tabulation and Chi square statistics were applied to assess the association between variables. P

value <0.05 was deemed as Significant. Descriptive studies were expressed in frequencies and percentages.

Table1: Showing that, amongst 100 epileptic patients 50% were having depression.

Prevalence of Depression	Frequency(N)	Percent (%)
Present	50	50%
Absent	50	50%
Total	100	100%

Table 2: Distribution according to severity of depression

Severity of depression	Frequency(N)	Percent (%)
Mild	29	29%
Moderate	13	13%
Severe	8	8%
Nil	50	50%
Total	100	100%

Table no.2 shows that among 100 epileptic patients 29% had mild depression, 13% had moderate depression and 8% had severe depression.

Table 3: Age distribution of the study population

	Frequency(N)	Percent (%)
12 – 28 years	39	39%
29- 44 years	37	37%
45- 60 years	24	24%
TOTAL	100	100%

Table no.3 showing that most of the study subjects have the epilepsy since their ages were between 12 - 28 years (39%) followed by 29 – 44 years (37%). Mean age of the study population is 34.13 years \pm 12.88 years (minimum age 14 years and maximum age 54 years).

Table 4: Sex distribution of the study population

Sex distribution	Frequency(N)	Percent (%)
Male	54	54%
Female	46	46%
Total	100	100%

Table no. 4 showing that among 100 epileptic subjects most of the subjects were male (54%) followed by female (46%).

Table 5: Distribution according to their Socio-economic status

Socio-economic status	Frequency(N)	Percent(%)
Lower Middle Class	37	37%
Upper Middle Class	37	37%
Upper Lower Class	13	13%
Lower Class	8	8%
Upper Class	5	5%
Total	100	100%

Table 5 shows among 100 subjects with epilepsy 37% subjects were from Upper middle class and lower middle class followed by upper lower class (13%). Lower class (8%) more than upper class (5%).

Table 6: Showing distribution of epileptic patients according to marital status.

Marital status	Frequency(N)	Percent (%)
Married	59	59%
Unmarried	41	41%
Total	100	100%

Table 6 showing that among 100 epileptic subjects most of the patients were married (59%) followed by unmarried (41%).

Table 7: Distribution according to the type of epilepsy

Types of Epilepsy	Frequency(N)	Percent (%)
Generalized tonic clonic seizure	41	41%
Complex partial seizure	26	26%
Absence seizure	24	24%
Simple partial seizure	5	5%
Partial with secondary generalization	4	4%
Total	100	100%

Table no. 7 shows the types of the epilepsy found in the study group. In this study, among 100 epileptic subjects most no. of the subjects had Generalized Tonic Clonic Seizure (41%) followed by complex partial seizure (26 %) and absence seizure (24%). Simple partial seizure is 5% and partial seizure with secondary generalization is 4%.

Table 8: Depression in different types of epilepsy

Depression	Generalized Tonic Clonic Seizure	Absence Seizure	Complex Partial Seizure	Simple Partial Seizure	Partial Seizure with Secondary Generalization	Total
Present	20	7	18	2	3	50
Absent	21	17	8	3	1	50
Total	41	24	26	5	4	100

Table no.8 shows that among total 100 epileptic patients depression is present in 50 patients. Among 50 patients, depression in generalized tonic clonic seizure (20) is more than complex partial seizure (18) followed by absence seizure (7).

Discussion

This is a cross sectional descriptive study, aimed to understand depression among epileptic patients from its prevalence and its relationship with other variables. Study was carried out on 100 epilepsy patients referred from Neurology clinics of Medicine dept. and patients from psychiatry OPD. The study was approved by Tripura University (Central) and informed consent was obtained from

each of the study participants. Patients younger than 12 and older than 60 years of age, and patients suffering from other medical or psychiatric disorders were not included in the study. In this study, ICD10 diagnostic criterion was used to diagnose the presence of depression. The Beck questionnaires consisting of 21 items of multiple-choice questions with increasing severity of depression were given to the patients having depression and they were asked to answer the questions independently (self-report).

In this study, data analysis revealed that the prevalence of depression among epileptic patients was 50% of all 100 epileptic subjects, divided between 29% have mild depression, 13% have moderate depression, and 8% have severe

depression. The prevalence of depression among epileptic patients is variable in the previous studies, from as low as (9.5%) as shown in the study of Pooya & Sperlin⁽⁴⁷⁾, to as high as (61%) as shown in the study of Yousafzai et al.⁽⁴⁴⁾ In my study finding about 50% of our patients had depression, in spite of high prevalence in comparison with some previous studies.

Differences of the prevalence of depression may be because of methodological differences and may be due to associated socio-economic factors in our society.

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Abbreviations

AEDs- Anti Epileptic Drugs, AOR- Adjusted Odd Ratio, AGMC- Agartala Government Medical College, BDI- Beck Depression Inventory, CNS- Central Nervous System, EEG- Electro Encephalography, GABA- Gamma Amino Butyric Acid, IPD - In Patient Department, ICD- International Classification of Disease, OPD- Out Patient Department.