

SCREENING FOR COMORBID DEPRESSION AMONGST EPILEPTICS RECEIVING TREATMENT AT THE UNIVERSITY OF PORT HARCOURT TEACHING HOSPITAL (UPTH).

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ABSTRACT

BACKGROUND: *There has been a renewed interest in the psychological wellbeing of people with epilepsy in the recent times. Studies have shown that nearly as many as two third of people with epilepsy develop clinically relevant depressive disorders . Depression in epilepsy is common but often an unrecognised comorbid malady.*

AIM *To determine the current state of evidence about the comorbidity of epilepsy and depression.*

METHODOLOGY: *The study was carried out at the department neuropsychiatry, UPTH. Appropriate sample size was calculated from prevalence of depression in epilepsy in previous studies using the formula by Araoye. A random selection of epileptic patients attending the neuropsychiatric outpatient clinic was made. A sociodemographic questionnaire, the GHQ-12 instrument, followed by the Beck's Depressive Inventory (BDI) were administered to participants. Definitive diagnoses were made using the DSM-IV criteria. The results were analysed using Microsoft Excel and SPSS window version 16.*

RESULTS: *A total of 320 subjects with epilepsy were enlisted for the study, out of this figure, 212 (67.5%) had depression, of this figure, 118 (55.7%) were females while 94 (44.3%) were males. All patients seen were between 19–54 years (mean age 36.5 years).*

CONCLUSION: *This study showed high prevalence of depression in epilepsy and was highly represented in those without employment as well as those who were meaningfully employed, those with frequent seizure attacks, high level of stigma as well as those living in hostile environments.*

KEY WORDS: *Screening, Comorbid Depression, Epilepsy, Port Harcourt.*

Introduction

There has been a renewed interest in the psychological wellbeing of people with epilepsy in the recent times.¹⁻⁴ Studies have shown that nearly as many as two third of people with epilepsy develop clinically relevant depressive disorders¹⁻⁵. Depression in epilepsy is common but often an unrecognised comorbid malady¹⁻⁸. However, the facts surrounding the comorbidity of depression are not widely known. Although no one questions the fact that epilepsy is a risk factor for depression¹⁻⁸, recent studies have also revealed that a history of depression is associated with a 4 to 6 – fold greater risk of developing epilepsy^{9,10}. These data suggest either a possible “bi-directional” relationship between these two disorders or the presence of common pathogenic mechanisms that facilitate the occurrence of one in the presence of the other⁵⁻⁷. This study sets out to review the current

epidemiology of depression associated with epilepsy.

Depression is the most frequent comorbid psychiatric disorder in epilepsy¹⁻⁸. Its lifetime prevalence has been estimated at between 6% and 30% in population-based studies and up to 50% among patients followed in tertiary centers²⁻⁴. The risk of suicide has been estimated to be 20 times higher^{9,11}. The clinical presentation of depressive disorders in epilepsy can be identical to that of nonepileptic patients and can include major depression, bipolar and dysthymic disorders, and minor depression^{14,15}. In a significant percentage of cases, however, the clinical features of depression in epilepsy may be iatrogenically induced with various antiepileptic drugs used to treat the seizure disorder or after surgical treatment of intractable epilepsy^{12,13}. Despite its relatively high prevalence,

depression remains unrecognised and untreated⁸, and unfortunately its treatment is based on empirical and uncontrolled data^{12,16}.

The impact of depression on people with epilepsy is significant^{12,13}. In addition to impairing daily functioning^{14,15}, it can lead to greater seizure frequency and less seizure control through sleep deprivation and a failure to comply with medication or due to its role as an emotional stressor^{12,13,16}. Depressed people may abuse their medication, which can be potentially lethal in high doses and in combination with alcohol and stress drugs^{12,16}.

The diagnosis of depression is based on DSM-IV criteria. Feelings of sadness, guilt, self-blame and unworthiness are common. Anergia (lack of activity), anhedonia (unhappiness) and loss of appetite and weight, combined with sleep disturbances are often encountered^{1-6,9}.

Distinguishing features of epilepsy-associated depression are chronic depression and a relative risk of neurotic traits, such as Somatization, self-pity and a history of periods of agitated peri-ictal psychotic behaviour²⁻⁵. Major depressive episodes are more likely to occur during the interictal phase⁹, while shorter depressive episodes (usually not meeting DSM-IV criteria for depression and usually not requiring treatment) often occur peri-ictally. Paranoid or psychotic features may also accompany depression, suggesting psychotic depression⁹.

Other factors are social stigmatization, discrimination, vocational difficulties and restrictions in activities of daily life that contribute to feeling of loss of personal control². Feelings of inadequacy and fear that people will find out about their seizures often results in a lack of confidence to interact socially, withdrawal and isolation³. Social difficulties, combined with the strain of living with a chronic disability with unpredictable losses of consciousness, often lead to recurrent feelings of helplessness, embarrassment, loss of dignity and low self-esteem³⁻⁶. People with epilepsy often experience feelings of shame and self-blame for their illness⁹.

In addition to psychological factors, underlying brain disturbances, such as the Alzheimer's group of dementias and cerebral arteriopathies may predispose people with epilepsy to depression^{2,3}. Seizures, poor seizure control, ictal and subictal firing and kindling-like phenomena can also contribute to depression^{2,3}. Some evidence suggests that people with epilepsy of left temporal-lobe origin, especially those with underlying brain damage that produces seizures, are more predisposed to depression, a higher seizure frequency and less seizure control¹⁷.

Depressed people are less able to take measures to abort or inhibit their seizures by physical or psychological techniques^{12,16}. In a U.S. survey at the Maudsley Hospital, most people reported more seizures when they were tensed, depressed, tired or angry^{12,13}. They had fewer seizures when they were happy and calm. In this and other studies, happiness appears to be a powerful anticonvulsant¹⁸⁻²⁰.

The most serious consequence of depression in epilepsy is a high risk of suicide rate. It is reportedly five times higher than that in the general population⁹. For people with temporal-lobe epilepsy, the risk of suicide is 25-fold higher than in the general population¹⁷.

There is a higher risk of attempted suicide, particularly due to overdoses. Reasons include underlying brain disturbances that cause seizures and depression, the overwhelming feeling of helplessness and hopelessness from uncontrolled and unpredictable seizures, and easy access to the anticonvulsant medications^{12,16,18}. It is important to note that in people with epilepsy and depression, suicide risk should be continuously assessed^{12,16}.

Differential diagnosis includes manic depression, panic disorder, post-traumatic stress disorder, underlying psychotic disorders, substance abuse, adjustment disorder with depressed mood and complicated grief or bereavement.

Often, an extended period is required for diagnosis, due to the person's mental confusion and reluctance

to disclose information. A thorough mental-status examination should always be performed, assessing mood, affect, and the presence or absence of perceptual and thought disorders, suicidal ideation and risk factors, cognition and anxiety symptoms. People with depression and epilepsy benefit from both pharmacological treatment as well as psychotherapy^{12,16,19}. Drug treatment is highly individualised and depends on the presentation and severity¹⁹. These individuals benefit from antidepressants and anticonvulsants, while complication with psychosis will require the use of antipsychotic medications^{12,16}.

AIM

To determine the prevalence of comorbidity of depression in people with epilepsy.

METHODOLOGY

SUBJECTS

Inclusion criteria

1. All those who were willing and gave informed consent.
2. Uncomplicated cases of epilepsy.

Exclusion criteria

1. Those with any other chronic medical conditions
2. Those who have any form of psychiatric diagnosis before the manifestation of epilepsy.

SAMPLE

Appropriate sample size was calculated from prevalence of depression in epilepsy in previous studies using the formula by Araoye. A random selection of epileptic patients attending the neuropsychiatric outpatient clinic was made. A sociodemographic questionnaire, the GHQ-12 instrument, followed by the Beck's Depressive Inventory (BDI) were administered to participants. Definitive diagnoses were made using the DSM-IV criteria. The results were analysed using Microsoft Excel and SPSS window version 16.

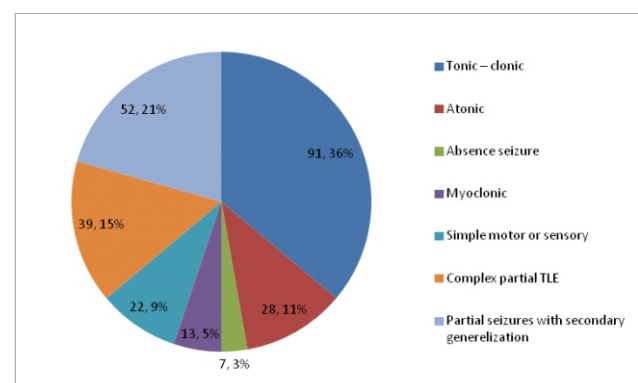
RESULTS

GHQ – 12 SCORES

SCORES	NUMBER OF PATIENTS
0 – 3	83
4 – 6	94
7 – 8	73
9 – 12	64
Total	320

PREVALENCE OF DEPRESSION IN SEIZURE DISORDERS

TYPE OF SEIZURES	NUMBER WITH COMORBID DEPRESSION	PERCENTAGE
Tonic – clonic	91	36%
Atonic	28	11%
Absence seizure	7	5%
Myoclonic	13	21%
Simple motor or sensory	22	9%
Complex partial TLE	39	15%
Partial seizures with secondary generalization	52	21%
Total	212	



SEX RATIO

Females	118	55.7(%)
Males	94	44.3(%)
Total	212	100(%)

AGE DISTRIBUTION

AGE RANGE	NUMBER WITH COMORBID DEPRESSION
19 – 24	35 (%)
25 – 29	53 (%)
30 – 34	59 (%)
35 – 49	42 (%)
50 – 54	23 (%)
Total	212 (%)

OCCUPATION

Students	56 %
Employed	69 %
Unemployed	87 (%)
Total	212

MARITAL STATUS

GENDER	MARRIED	SINGLE	TOTAL
Females	49 (%)	69 (%)	118
Males	34 (%)	60 (%)	94
Total	83	129	212

A total of 320 subjects were enlisted for the study, out of this figure, 212 (67.5%) had depression, of this figure, 118 (55.7%) were females while 94 (44.3%) were males. All patients seen were between 19 – 54 years (mean age 36.5 years). Depression was significantly associated with employment status (both unemployment and those with meaningful employment), frequency of seizure attack, types of seizure, stigma and hostile environment (such as High Expressed emotion, family disharmony).

DISCUSSION

From the result, it was found that females with epilepsy have more prevalence of comorbid depression than males with same condition (epilepsy). This is consistent with known sex distribution of prevalence of depression in the general population, though the ratio is not 2:1^{2,3}. Cases of comorbid depression were significantly high in the young adult age group. This could be related to the fact that this group forms the active population and a chronic condition such as epilepsy places enormous occupational and social limitations in the sufferers⁶. Unmarried status as a risk factor for depression was also seen as a risk factor in the study⁶.

Data from the 2000/2001 Canadian Community Health Survey was used to determine prevalence of epilepsy and depression. 13% of those with epilepsy were found to suffer from depression, compared to 7% of those without the disorder. Epilepsy was also associated with 43% higher odds of depression when adjusting for demographic factors⁸. The odds were higher not only for minorities, but also for females, older adults and individuals experiencing food insecurity^{9,11}. Minority status and advanced age appear to be unique risk factors for depression in those with epilepsy^{7,9,11}, as these factors are not associated with depression in the general population.

Previous research indicates that, on average individuals

with epilepsy suffer from a greater number of chronic conditions, have worse self-reported health and experience increased pain^{14,15}. They are also more likely to have a lower quality-of-life related to both health and other factors^{14,15}. Individuals with epilepsy have also been found to exhibit higher levels of recent psychological distress, a greater likelihood for a variety of psychiatric conditions¹⁻⁸ and a higher prevalence of suicidal thoughts⁹. Sufferers also typically have lower incomes, less education and are less likely to have full or part-time employment^{2,4}.

“Individuals with epilepsy are vulnerable to depression, yet we have identified an important gap in mental health service provision”⁸, says Esme Fuller-Thomas of the University of Toronto, co-author of the study. “Routine screening and targeted interventions for depression are needed to help serve those with epilepsy”⁸.

Psychiatric disturbance may be higher in people with epilepsy than in those with other neurologic or medical illness⁸⁻¹¹, depression is the most common psychiatric illness in epilepsy, with a reported prevalence rate of up to 42%⁸. Yet depression is often underdiagnosed and undertreated in people with epilepsy⁸.

Both depression and epilepsy may be caused by common pathogenic variables^{12,13}. Psychological factors are likely critical in determining who has a particular biologic predisposition and will go on to develop depression¹⁻⁸. Other factors are:

- Social stigmatisation
- Discrimination
- Vocational difficulties
- Restrictions in activities of daily life.

Other factors that contribute to the development of depression in epilepsy are:

- Abnormalities in the synthesis and release of noradrenaline, dopamine, 5-hydroxytryptamine, GABA and corticotrophin-releasing hormone, often due to the combination of a genetic predisposition and psychosocial stressors^{12,13}.
- Polypharmacy^{12,16,17}.
- Anticonvulsant therapy^{12,16}.

Anticonvulsants that are important in causing

depression are Phenobarbital, phenytoin, vigabatrin and lamotrigine. In the case of phenytoin, the underlying mechanism may be the lowering of folic acid levels.

CONCLUSION

This study showed high prevalence of depression in epilepsy and was highly represented in those without employment as well as those who were meaningfully employed, those with frequent seizure attacks, high level of stigma as well as those living in hostile environments.

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