

FREQUENCY OF DEPRESSION IN EPILEPSY: A HOSPITAL BASED STUDY

Aziz-ur-Rehman Yousafzai, Abdul Wahab Yousafzai, Rizwan Taj*

Department of Psychiatry, Ayub Medical College, Abbottabad, *Department of Psychiatry, Pakistan Institute of Medical Sciences, Islamabad, Pakistan

Background: Depression is the most frequent psychiatric morbidity among epileptic patients adversely affecting their quality of life. It has also been associated with deliberate self harm and suicide. The objectives of this study were to know the frequency of depression in epileptic patients coming to neurology clinic of tertiary care hospital and also to find an association of clinical and demographic variables of epileptic patients with depression. **Methods:** Convenient sampling method was used to select patients after informed consent. Depression was diagnosed using semi structured interview based on ICD-10. Data was analysed using SPSS version 10.0, and analysis carried out using descriptive and inferential statistics. Chi-square test of association was applied to see the significance. **Result:** Out of total 100 patients 55% were males, 47% were married and mean age of the patients was 25.5 ± 4.34 years. About 60% patients were found depressed at the time of interview. Male patients, being married and coming from low socioeconomic stratum were significantly associated with depression. None of the patient was on anti-depressant medication. **Conclusion:** Depression was found to be highly prevalent psychiatric morbidity in epileptic patients. Men, married status, uncontrolled epilepsy and low socioeconomic group more prone to have depression.

Keywords: Depression, Epilepsy, Suicide

INTRODUCTION

Depression is the most frequent psychiatric morbidity in epilepsy. Corpus has written around 400 BC, 'Melancholic ordinarily become epileptics, and epileptics' melancholics: what determines the preference is the direction the malady takes; if it bears upon the body, epilepsy, if upon the intelligence, melancholy.¹ Almost 30–50% of epileptic patients have clinical depression as well.^{2,3}

Incidence of suicide and deliberate self-harm is believed to be at least five times higher in epileptic patients than general population. Patients with temporal epilepsy are even more vulnerable to commit suicide.⁴ Also in children it is one of the neurological conditions in children, shown to be strongly associated with suicidal behaviour.⁵

Depression has also been found to be the most important factor associated with reduced Quality of Life (QOL) in epilepsy rather than epilepsy itself.⁶

Unfortunately depression remain unrecognized and untreated in large number of epileptic patients and usually not given attention in the overall management of epilepsy.⁷

Few studies have been conducted looking at prevalence of epilepsy in Pakistan.⁸ There has been no research so far studying prevalence of depression in epilepsy. This study aims to look at frequency of depression in diagnosed epileptic patients coming to tertiary care hospital.

MATERIALS AND METHODS

This study follows cross sectional design was carried out at Clinical Diagnostic Centre (CDC) for epilepsy

in the neurology department of Pakistan Institute of Medical Sciences, Islamabad. Consenting individuals were included in the study and convenience sampling technique was used to select patients. A total of 100 diagnosed patients were included in the study. Depression was diagnosed using International Classification of Disease 10th version (ICD-10).

Socio-demographic particulars of participants like age, gender, education status, marital status, and monthly income were recorded using profarma. Clinical information like types of epilepsy, whether controlled or not, medications type and duration of illness were also recorded on a separate profarma.

Data was managed using SPSS-10.0 and analysis was carried out by using descriptive and inferential statistics. Chi-square test was applied to see association of demographic variables like gender, age, marital status and socioeconomic condition with depression. A *p*-value of <0.05 was considered significant.

RESULTS

Total 100 epileptic patients were included in the study. More than half were married and slightly less than fifty percent were single. Mean age of the patients was 25.5 ± 4.34 years.

All patients were on Anti Epileptic Drugs (AED). About 55% had seizure over last 3 months while 45% had one seizure in the preceding week.

Slightly more than 60% patients were fulfilling ICD-10 criterion for depressive episode. Out of them nearly 60% were males, 71% were

married and 66% had monthly income less than Pak Rs 5,000 (US \$ 60).

Chi-square test of association shows that epilepsy was significantly associated with depression ($p<0.01$). Patients who had one or more seizure episodes in the preceding week, were also associated with depression ($p=0.05$).

Male gender, being married and having monthly income less than Pak Rs. 5,000 were also found to be significantly associated with depression ($p<0.05$) as shown in the Table-1. None of the patients was on anti-depressant medication.

Table-1: Variables of Epileptic Patients with Depression.

| Variables | Depression | | Total | p-value* |
|------------------------------------|------------|----|-------|----------|
| | Yes | No | | |
| Epilepsy | 61 | 39 | 100 | 0.01 |
| Epilepsy status | | | | |
| Control | 23 | 31 | 54 | 0.05 |
| Uncontrolled | 30 | 16 | 46 | |
| Gender | | | | |
| Male | 33 | 22 | 55 | 0.05 |
| Female | 28 | 17 | 45 | |
| Marital Status | | | | |
| Married | 41 | 16 | 57 | 0.01 |
| Unmarried | 20 | 23 | 43 | |
| Monthly income (Pak Rupees) | | | | |
| <5000 | 34 | 17 | 51 | 0.05 |
| 5000–10000 | 23 | 16 | 39 | |
| >10000 | 4 | 39 | 10 | |

*Using χ^2 -test for differences between clinical and demographic variables with regard to depression

DISCUSSION

Lifetime prevalence of depression has been estimated at between 6% and 30% in population-based studies and up to 55% among patients followed in tertiary centers.⁹

Various factors have been reported to be responsible for depression in epilepsy, which include biological determinants like seizure control, type, severity, polypharmacy and choice of AEDs.¹⁰

Some authors give more importance to social factors leading to depression in epilepsy and these are stigma, fear, attribution style, adjustment issues and social support, responsible for depression in epilepsy.¹¹

Our study findings are in agreement with previous research. About 61% of our patients had depression. We also found significant association of depression with seizure control and also longevity of the disease. Variables like socioeconomic condition, marital status, and being male with depression.

In our sample more married have depression than single which could be explained by the additional marital responsibilities stressful for the patients. Apart from this sexual side effects of AEDs could also play role. Both impaired sexual desire and performance, has been reported in both men and

women with epilepsy. In men the dysfunction looks more a primary physiological.¹²

Altshuler found the highest Beck Depression inventory (BDI) scores in male patients with temporal lobe epilepsy (TLE) and Strauss found that men with left-sided foci were more vulnerable to depression.¹³ Other authors have also found men with epilepsy to be over-represented in depressed patients.¹⁴ Our findings also lend support to these findings research where more males were found depressed than females.

Despite such a high prevalence of clinical depression not a single patient was on antidepressant medications. This finding lends support the fact that depression has persistently been under-diagnosed and under-treated by the neurologist.¹⁵

Results of antidepressant treatment in epilepsy have found to be very promising¹⁶. About 60–70% of acute major depressive episodes will respond to antidepressant treatment, and the choice of antidepressant agent depends on the most prominent symptoms of depression.

Psychotherapy can also be used to improve coping skills, and this has been shown to improve mild depressive illness and anxiety and secondarily reduces seizure frequency.¹⁷ Some times mere adjustment of AEDs, preferably as monotherapy aiming to attain optimal seizures has been found to be accompanied by an improvement in psychosocial function.¹⁸

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Electroconvulsive therapy (ECT) is not contraindicated in patients with epilepsy and may be life-saving in those with severe or psychotic depression not responding to antidepressants.¹⁹

CONCLUSION

In spite of staggering figures of depression in epilepsy, none of the epileptic patient was on antidepressant. Male married patients, and having uncontrolled epilepsy, were found to be significantly depressed.

Further research is required to formulate indigenous strategies to treat depression effectively in epileptic patients.

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Address for Correspondence:

Dr. Abdul Wahab Yousafzai, Assistant Professor, Department of Psychiatry, Ayub Medical College, Abbottabad, Pakistan. Cell: +92-321-2217918.

Email: wahab.yousafzai@aku.edu, wahab.yousafzai@gmial.com