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Editorial

An Approach to Psychiatric Disorders in the Patient with Epilepsy

Juan E Bender del Busto*

Philosopher Doctor, Second Degree Specialist in Neurology, Full Professor and Researcher, International Center of Neurological Restoration (CIREN), Havana, Cuba

***Corresponding Author:** Juan E Bender del Busto, Philosopher Doctor, Second Degree Specialist in Neurology, Full Professor and Researcher, International Center of Neurological Restoration (CIREN), Havana, Cuba. **E-mail:** jebender@infomed.sld.cu

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In this comment, we will try to expose an issue that relates Psychiatry and Neurology, by reviewing the psychiatric disorders that may occur in the patient with epilepsy, which are not taken into account in the management of the patient and therefore with unsatisfactory evolution.

Epilepsy is one of the most frequent Central Nervous System (CNS) disorders [1] and a disease known since ancient times. It is a global health problem [2], with an estimated 50 to 69 million people suffering from it [3-5].

These patients throughout history have been highly discriminated [6] in many areas of life, and may be associated with a psychiatric comorbidity, with social, psychobiological and economic consequences [7,8].

In turn, this disease can compromise the quality of life of those who suffer from it, since in many cases it affects the emotional state, behavior, social and cognitive functioning [8].

From the initial descriptions, epileptic disease was related to behavioral, thought and mood alterations [9], although with a magical religious etiological concept [10].

However, it was not until 1860 that Falret and Morel made the first descriptions of psychiatric disorders in people with epilepsy [11] and later Kraepelin used the terms "periodic dysphoria", which represented the most common psychiatric disorders in people with epilepsy. and they were characterized by irritability, in addition to attacks of anger, depressive affect, anxiety, insomnia and headache [12].

Conceptually, epilepsy presents a patient who has suffered a seizure and whose brain, for whatever reason, shows a pathological and continued tendency to suffer recurrent seizures with biological, cognitive, psychological and social consequences [13,14].

Indeed, the incidence of neurobehavioral disorders is considered to be higher in patients with epilepsy and a relationship can be established between these disorders and focal temporal and frontal lobe epilepsy [14] and in treatment-refractory patients with epilepsy, according to some authors in up to 40% of the patients [15-17], reporting series of patients with epilepsy in which about 70% had a concomitant psychiatric disorder [18,19].

In these patients, the clinical manifestations are atypical, episodic and pleomorphic [9,20,21] and with an evident impairment of the quality of life [22,23], which makes it difficult for health personnel to interpret and therefore frequently mental disorders are underdiagnosed in patients with this disease. Patients also tend to minimize complaints for fear of being discriminated against and fear that psychotropic drugs lower the seizure threshold [24]. In this regard, the health professional has to insist on the search for these elements

and try to support the patient and not only achieve adequate control of epileptic seizures, but also direct their efforts towards their comprehensive management, which includes the emotional state and the quality of life of the patient [25].

The factors related between epilepsy and conduct disorders must be taken into consideration [8], which leads to the analysis of the mechanisms that relate epilepsy and behavioral disorders, among which the following stand out: common neuropathology, genetic predisposition, disorders of the development, ictal neurophysiological effects, inhibition or hypometabolism surrounding the epileptogenic focus, secondary epileptogenesis, secondary endocrine disorders, independent psychiatric disease, consequences of medical or surgical treatments and the psychosocial burden of the disease.

Since 1984, Hermann., *et al.* have been grouping the main causes of psychiatric disorders in epilepsies into 3 large groups: biological, psychosocial and drug [26]. Socio-demographics have been added to these and are described as follows [27]:

- **Biological factors:** Age of onset of seizures; Types of attacks; Duration of crises; Electroencephalogram (EEG) characteristics; Presence of brain damage; Alteration of neuropsychological functions; Brain metabolism efficiency; Alteration of neurotransmitters and adverse effect of psychiatry to epilepsy surgery.

- **Psychosocial factors:** Control of the epilepsy focus; Adaptation to the disease; Fear of crises; Family overprotection; Adaptation to the financial system; Financial problems; Adaptation to the life system and social support.

- **Drug factors:** Monotherapy v/s polytherapy; Folate deficiency; Monoamine alterations; Presence of barbiturate treatment; Hormonal effect and alterations of brain metabolism.

- **Socio-demographic factors:** Age, sex, race, level of education, marital status, demographic and cultural characteristics of the area where the patient lives.

Multiple interacting biological and psychosocial factors determine the risk for the development of schizophreniform psychoses, major depression and behavioral disorders in patients with epilepsy [28,29].

The professional who cares for these patients should know that, from the clinical point of view, the most common psychiatric disorders in epilepsy are depression, anxiety and psychosis, although for most authors, depression is the most common psychiatric disorder. common among people with epilepsy [30], worsening the prognosis and quality of life, which was described by Hippocrates [31-35]. Often these comorbidities are not recognized and when they are diagnosed, treatment is suboptimal.

Depression in patients with epilepsy is a predictor of a worse response to pharmacological and surgical treatment [36,37]. It occurs more frequently in patients with focal frontal and temporal lobe seizures and even more so in patients with refractory epilepsy, with an important impact on quality of life [38].

Another aspect that must be analyzed is suicide, as one of the variables associated with morbidity and mortality in people with epilepsy [39,40]. Depression is one of the psychiatric disorders that increases your risk [40] and this possibility should never be excluded.

Adverse psychiatric events, including symptoms of depression and anxiety, have been reported with the use of some antiepileptic drugs (AEDs), particularly barbiturates (Phenobarbital and Primidone), Topiramate, Tiagabine, Zonisamide, Vigabatrin, and Levetiracetam [41]. However, the incidence of suicide phenomena related to AEDs has not been well studied [41,42].

Suicidal ideation has been demonstrated in patients with refractory focal epilepsy and among these in temporal lobe epilepsy [43].

Anxiety is also a frequent symptom in patients with epilepsy and it is described that it can appear before the symptoms of focal seizures, in the interictal state. More anxiety is described in patients with focal epilepsy of the frontal lobe and [44,45] some authors consider that the risk is higher in focal epilepsies of the temporal lobe [46]. However, the authors agree that the highest rates of psychiatric comorbidities, including anxiety, are reported in patients with chronic refractory seizures [47].

Anxious symptoms, especially if they are noticeable, can have significant implications on the quality of life of patients with epilepsy [48,49] and the consequences can be disabling, causing avoidance and isolation behaviors [50,51].

Personality disorders in patients with epilepsy can cause abnormal behaviors, which can have a direct impact on seizure control and quality of life [52,53].

Since 1975, Geschwind syndrome involving interictal behavior consisting of circumstantiality, altered sexuality and animosity has been described in a patient with temporal lobe epilepsy (TLE) [54].

The personality profile of a patient with epilepsy was also summarized by Trimble, considering that it can be explained by a complex combination of effects of the relationship with chronic diseases, the effects of AEDs and the pathology of the temporal lobe.

He asserted, however, that certain personality alterations in epilepsy should be seen as associated with brain abnormalities that are also seizure-inducing [41]. In this regard, the health professional has to bear in mind the importance of the doctor-patient relationship, since on occasions, the interrelation is very difficult due to the personality disorders described, which if not handled properly, imply inadequate results.

Also, patients with epilepsy may be at risk of psychosis, which has been described more frequently in patients with treatment-refractory temporal lobe epilepsy [17,55-62]. In this aspect, the management of the health professional is also important, due to the difficult relationship with the patient.

They can be classified according to their relationship with the occurrence of epileptic seizures in periictal (preictal, ictal or postictal) and interictal [63,64] and it can be noted that some neuroanatomical changes have been demonstrated, observed in patients with psychosis, the most significant reduction in the volume of the tonsil-hippocampal complex [65].

Finally, some considerations in the patient who undergoes surgery, since it is reported by most authors that psychiatric symptoms improve with surgery in epilepsy, however, a history of psychiatric disorders before surgery is associated with poor postsurgical remission of epileptic seizures [66]. This detail has significance in the presurgical stage and must be taken into consideration.

Also, it is necessary to consider that risk factors for depression after epilepsy surgery include a preoperative history of mood disorders and Medial Temporal Lobe surgery [67,68].

Evolutionarily, patients who can reduce or stop taking AEDs after surgery may experience a significant improvement in memory, processing speed and language, particularly if they were taking multiple AEDs at high doses, as is typical in epilepsy. refractory [69].

To conclude, patients with epilepsy can present associated psychiatric disorders and it is significantly important that health personnel know them, so that the patient can be managed in a comprehensive way and satisfactory results are achieved.

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