

Epilepsy and Bipolar Disorders: About A Clinical Case

Anouar KADDAF^{1*}, Zakaria HAMMANI², Mohamed KADIRI³^{1,3}Department of Psychiatry, Military Hospital of Instruction Mohamed V, Rabat²Department of Psychiatry, Military Hospital of My Ismail, MeknesDOI: <https://doi.org/10.36347/sjmcr.2025.v13i11.052>

| Received: 17.09.2025 | Accepted: 21.11.2025 | Published: 26.11.2025

***Corresponding author:** Anouar KADDAF

Department of Psychiatry, Military Hospital of Instruction Mohamed V, Rabat

Abstract

Case Report

Bipolar disorder is frequently associated with medical comorbidities that complicate its clinical course and prognosis. Among these, epilepsy represents a significant risk factor for psychiatric morbidity and may contribute to diagnostic and therapeutic challenges. We report the case of a 49-year-old man with a history of thyroidectomy, type 2 diabetes, and bilateral frontal epilepsy, who presented with an acute manic episode. The episode occurred in the context of poor sleep, irritability, psychosocial stressors, and partially controlled epilepsy. A diagnosis of bipolar I disorder was confirmed, considering a previous psychiatric hospitalization concomitant with the onset of seizures. This case illustrates the complex relationship between bipolar disorder and epilepsy, as well as the impact of metabolic and endocrine comorbidities—such as diabetes and thyroid dysfunction—on seizure frequency, mood instability, and treatment response. Specific diagnostic considerations include differentiating bipolar manifestations from epilepsy-related dysphoric disorders. Therapeutic management must account for interactions between psychotropic and antiepileptic medications, the risk of lowering seizure threshold, and the need for regular neurological and endocrinological monitoring. This observation highlights the importance of early recognition and integrated care for comorbid conditions in bipolar patients, given their significant somatic morbidity and mortality.

Keywords: Bipolar disorder; Epilepsy, Mania; Thyroid dysfunction; Type 2 diabetes, Mood instability, Antiepileptic drugs, EEG monitoring.

Copyright © 2025 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution **4.0 International License (CC BY-NC 4.0)** which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

The evolutionary course of bipolar disorder is most often accompanied by the comorbid development of several somatic conditions. Epilepsy, like other neurological disorders, represents a significant risk factor for psychiatric morbidity. Studies conducted on bipolar disorder and comorbidities have mainly focused on two areas: The first examines medical comorbidities in bipolar patients, primarily cardiovascular disorders, thyroid dysfunction, obesity, migraine, and diabetes. The second investigates bipolarity in patients followed for a medical condition, notably epilepsy and thyroid disorders.

CASE REPORT

Mr. E.Y. is a 49-year-old patient, married and father of three children. His medical history includes a total thyroidectomy performed in 1992, and he is currently on levothyroxine sodium 100 mg/day. He has type 2 diabetes, diagnosed 7 years ago, treated with glimepiride-metformin 2 mg/500 mg (4 mg/1000

mg/day). He has been known to have epilepsy for 3 years; the diagnosis was made following an episode of status epilepticus and confirmed by electroencephalogram (EEG), which showed bifrontal activity. However, the medical history revealed the presence of convulsive seizures dating back 5 years, which had gone undiagnosed. Since starting on carbamazepine 200 mg (600 mg/day), the seizures have decreased but remain intermittent.

He was referred to us as an emergency following an episode of psychomotor agitation. Received in the emergency department, he was admitted the same day to the psychiatry unit after ruling out a medical emergency. His coworkers and spouse had noticed recent behavioral changes over the past few days: he appeared unstable, unable to stay still, logorrheic, with mood lability and uncontrollable anger outbursts. The patient reported experiencing sleep disturbances and irritability for several days, along with anxious ruminations about his work, worsened by the recent death of his father.

He was started on atypical antipsychotics and antiepileptic drugs. The outcome was favorable, with sedation from psychomotor agitation within a few days. A diagnosis of type I bipolar disorder was made, given that this episode was not his first psychiatric presentation. The patient had already been hospitalized 3 years earlier for similar manifestations, concomitant with the initial discovery of his epilepsy. At hospital discharge, a diagnosis of epilepsy-induced dysphoric disorder had been suggested, without excluding possible bipolarity. Since then, the patient had received regular follow-up in psychiatry and neurology (the EEG performed 3 months before the current episode showed persistent bifrontal electrical activity despite a normal neurological exam and brain MRI). During the same period, poor treatment adherence was noted regarding his diabetes and hypothyroidism, whereas his mood appeared stabilized.

DISCUSSION

This case report perfectly illustrates the entanglement of these two clinical dimensions. Chronic illnesses in general represent a significant risk factor for psychiatric morbidity, and epilepsy itself, like other neurological disorders, constitutes an additional risk factor [1]. The prevalence of mental disorders is higher in patients with epilepsy compared to the general population, estimated between 20 and 30%. Unipolar mood disorders are the most represented (50–60%) [2]. Concerning bipolar disorder, its association with epilepsy appears rarer, with a prevalence ranging from 0.1% to 5% in epileptic patients [1]. Recent studies report a prevalence of 12%, i.e., 2.5 times higher than expected [2]. From a pathophysiological perspective, the involvement of temporo-limbic and frontal networks has been suggested [2].

In our patient, the association of bipolar disorder type I with bilateral frontal epilepsy is consistent with classical literature. As early as 1953, Lempérière demonstrated a high prevalence of hyperemotivity and mood instability in a cohort of 121 epileptic patients [2].

It appears that bipolar disorder may take on specific clinical features when associated with epilepsy (rapid cycling, less severe symptomatic episodes), as seen in our patient [1,3]. Epilepsy-induced dysphoric disorders are the main differential diagnosis to consider [3]. The mood disturbance may have a direct chronological relationship with the seizure, as in our case, and may be qualified as peri-ictal, ictal, or post-ictal [2]. Otherwise, it is termed interictal (mood changes occurring independently of seizures) [3].

Therapeutic considerations: For our patient, the dose of carbamazepine was maintained because of its antimanic and prophylactic efficacy in bipolar disorder. His favorable clinical course allowed for a rapid reduction in olanzapine dosage in order to avoid lowering the seizure threshold [2]. Therapeutic

monitoring of bipolar disorder associated with epilepsy requires regular control EEGs and serum levels of antiepileptic drugs and antidepressants (SSRIs, recommended as first-line, may increase serum levels of antiepileptic drugs) [2].

Lithium salts are only second-line treatments because of their proconvulsant properties and the electrical abnormalities they induce on EEG. Electroconvulsive therapy is possible, whereas transcranial magnetic stimulation is not recommended. Several authors highlight the importance of supportive therapies and cognitive-behavioral techniques in relapse prevention [2].

In this patient, epilepsy is maintained and aggravated by several comorbidities frequently found in bipolar disorder, such as diabetes and thyroid dysfunction (which increase the frequency or severity of seizures). Several studies have shown that the prevalence of type 2 diabetes is higher in bipolar patients compared to the general population (approximately 26%) [4]. Diabetes has negative consequences on the course of bipolar disorder: increased chronicity, more frequent rapid cycling, and longer hospitalization durations. Bipolar patients with type 2 diabetes have higher mortality than diabetic patients without bipolar disorder, likely due to more rapid progression of diabetes, inadequate management, or coexistence of other comorbidities [4]. Thyroid disorders are common in bipolar disorder and cause metabolic abnormalities, significant mood fluctuations, poor treatment response, and persistent residual symptoms [4].

These comorbidities justify endocrinological evaluation in anyone presenting with mood disorders, especially when onset occurs late in life or in the absence of a family history of bipolar disorder [5]. Finally, 70% of euthymic bipolar patients have significant sleep disturbances. These circadian disruptions contribute to metabolic dysregulation (lipid and glucose). Lack of sleep is an aggravating factor for epilepsy (lowering of the seizure threshold) [5].

CONCLUSION

Whether a cause or consequence, it is crucial to recognize the accompanying conditions that may precipitate bipolar disorder, whose somatic morbidity and mortality remain high. Management requires collaboration between psychiatrists, neurologists, dieticians, and endocrinologists, reinforcing the concept of bipolar disorder as a multisystemic disease.

REFERENCES

1. M. Daudin *et al.*, Association psychose et épilepsie : quels liens ? A propos d'un cas. Annales Médico-Psychologiques 2015 ; 173 : 531–35.
2. M. Masson, M.-L. Bourgeois. Troubles bipolaires de l'humeur et épilepsie : une discussion à partir de

- deux cas cliniques. Annales Médico Psychologiques 2007 ; 165 : 529–35.
3. M. Masson, M.-L. Bourgeois. Les troubles bipolaires de l'humeur et l'épilepsie : une revue de la littérature. Annales Médico Psychologiques 2005 ; 163 : 410–19.
 4. K. Zaghib *et al.*, Santé physique et troubles bipolaires. Annales Médico-Psychologiques 2012 ; 170 : 56–61.
 5. J.-P. KAHN. Comorbidités et troubles bipolaires. L'Encéphale 2006 ; 32 : 511-4.