Mania after termination of epilepsy treatment: a case report

Like many other medical conditions, epilepsy itself increases the risk of psychiatric disorders. Underlying neurological dysfunction due to epilepsy may predispose to psychiatric disorders.[1,2] There is a similarity between epilepsy and Bipolar Disorder (BD) as they are both episodic, chronic disorders treated with antiepileptic drugs (AEDs) such as valproic acid and carbamazepine (CMZ).[3] However, data on epidemiology and the relationship between epilepsy and mood disorders, is limited to unipolar depression.[1,2,4]

The patient, a 16-year-old Caucasian female, was brought to the emergency department by her mother with complaints of excessive talking, hyperactivity and decreased need for sleep of two weeks duration. According to her mother, the patient became progressively more agitated, irritable, euphoric, loquacious, and inappropriately jocular in the preceding two days and wandered the house getting nervous about the noises of children she claimed to have in her head. Reviewing her medical history, it was determined that she had a history of cerebral palsy and mild mental retardation. She had been treated with CMZ for complex partial epilepy from her birth until two months earlier when the medication was stopped following a 7 year seizure-free period. She had never had an affective episode before.

In the psychiatric evaluation she was restless and irritable, fully oriented but distractable. She showed flight of ideas, loosened associations and grandiose delusions. Her neurological examination, laboratory studies, cranial magnetic resonance imaging and electroencephalogram were normal. She was diagnosed with a manic episode with psychotic features.[5] This manic episode took place after stopping CMZ.

The patient was followed weekly as an outpatient. 400 mg/day CMZ was prescribed again and 2 mg/day risperidone was commenced due to the psychotic features. Her manic symptoms resolved within two weeks, with a blood CMZ level of 8.1 µg/ml. Her affect was euthymic and she had no psychiatric symptoms other than ones related to mild mental retardation and cerebral palsy (poor ability to abstract, impaired communication and fine motor deficits). The patient was followed on a monthly basis for the first 3 months and risperidone was stopped due to a symptom-free period while 400 mg/day CMZ was continued with a prophylactic blood concentration of 8-10 µg/ml. The follow-up intervals were increased to 6 months and for 2 years she had no recurrence.

Informed consent was obtained from her mother to publish the case material on an anonymous basis.

Medical comorbidites are common in BD[1,2] while psychiatric problems are often observed in epilepsy, especially mood and affective disturbances.[2,6] In this patient, the time of onset of manic symptoms - without a history of BD - suggests a relationship with the termination of CMZ treatment. CMZ had served as a mood stabilizer as well as an AED for this patient and she was thus thought to have both epilepsy and BD.

Although depression is the most common affective disorder seen in epilepsy[2,6] data on the relationship between manic episodes and epilepsy is limited. This raises the question of whether manic episodes in epilepsy are truly rare, or if the AEDs used to treat the disorder suppress the emergence of manic episodes.[3] The recognition of manic episodes, and by definition BD, in such a situation may thus be difficult.[4] The kindling phenomenon, irregularities in neurotransmitters and voltage gate ion channels and secondary messenger systems are shared biochemical and pathophysiological underpinnings in the etiology of both these chronic, episodic disorders.[7,8,9] However, in contrast to epilepsy, only some AEDs are curative for BD and no animal model can adequately match the mood swings.[9,10] Understanding the pharmacodynamics of these common curative AEDs could improve the understanding of the pathophysiology of both conditions[3,8] and BD should be considered in the treatment of an affective episode during epilepsy.

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