

Treatment of Intermittent Explosive Disorder With Carbamazepine

To the Editor:

Intermittent explosive disorder (IED) is an impulse-control disorder (ICD) defined by recurrent verbal or physical aggressive episodes that are nonproportional to psychosocial stressors or provocation.¹ Physical or verbal aggressive episodes mostly begin abruptly with or without psychosocial stressors, last for a short period,² and often lead to social, professional, legal, and financial problems. Anger outbursts usually start with a small triggering event concerning a close friend, colleague, or partner, although the triggering event may not be identified in many cases.³ The IED frequency was 3% to 5% in an epidemiological study that included adults and adolescents. Intermittent explosive disorder is more common in males and usually begins in late adolescence.² Intermittent explosive disorder is also more common in individuals with attention-deficit/hyperactivity disorder (ADHD).⁴ In an adult study, the ICD frequency was 66% in patients with an ADHD diagnosis.⁴ The most common ICD in these patients was IED, which was found in 29.6% of the adults with ADHD.⁴ Despite pharmacological treatments and cognitive-behavioral therapy being recommended for managing IED symptoms,⁵ current treatment approaches are less than fully effective.

Our goal in this report was to present an adolescent case with ADHD and IED showing dramatic improvements with carbamazepine treatment despite not responding to various other pharmacological agents.

CASE

A 12-year-old boy, accompanied by his family, was admitted to our outpatient clinic 4 years earlier when he was 8 years old. At the time he was admitted, he had difficulty in paying attention to his lessons and had complaints of excessive mobility at school and at home. As a result of the diagnostic interviews and the information obtained from his teachers and family, the patient was diagnosed as having ADHD according to the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* criteria. Short-acting methylphenidate (5 mg twice a day) was started for treatment.

Atomoxetine (40 mg/d) was added to the methylphenidate because of an inadequate response. Because the improvement in ADHD symptoms was not enough, atomoxetine (40 mg/d) was added in the controls. The patient benefited from this treatment and was regularly followed up for the next 3 years. At the third year of treatment, the patient was using long-acting methylphenidate (36 mg/d) and atomoxetine (40 mg/d). During the follow-up sessions, the patient and his family complained about sudden anger outbursts and displaying physical and verbal violence to his friends. He said that he suddenly felt angry and responded with verbal or physical violence—some of which was life threatening—and he usually felt regret after the incident. His mood was euthymic between the aggressive episodes. In addition to ADHD, the patient was diagnosed as having IED, and the methylphenidate dose was increased to 54 mg/d, and risperidone (1 mg/d) was added to the treatment. One month later, a depressive mood was recognized in the patient's psychiatric examination, and sertraline (50 mg/d) was added. However, the sertraline and risperidone treatments were stopped after 2 months of follow-up because of the lack of any significant improvement in his aggressive behaviors, and aripiprazole (5 mg/d) was started. Carbamazepine (2 × 200 mg/d) treatment was added 1 month after the beginning of the aripiprazole treatment because there was no improvement in his behaviors. After the addition of carbamazepine treatment, the patient did not have any anger outbursts in his 11 months of follow-up except for rare and mild anger attacks.

DISCUSSION

Intermittent explosive disorder is an ICD with anger outbursts that can lead to serious problems in a patient's social and professional lives.⁶ Other psychiatric disorders, such as mood and anxiety disorders, are also found in the majority of the patients.⁷ It is important to be diagnosed and treated early because IED can start earlier than other psychiatric disorders^{7,8} and cause destructive outcomes. Mostly, psychotherapeutic and pharmacological approaches are adopted in the treatment. Surgical interventions are used in cases that do not respond to very severe drug treatments.⁵ Although conventional antipsychotics, such

as haloperidol, trifluoperazine, and flupentixol, are reported to be effective in the short-term treatment of aggression, their long-term use is restricted because of impaired cognitive functions, sedation, and extrapyramidal system adverse effects.⁵ It is thought that atypical antipsychotics may be used in the long-term treatment of aggression with fewer adverse effects.⁵ There have been studies on the use of olanzapine, risperidone, and clozapine in aggressive patients.^{9,10} Another treatment option is the use of anxiolytic drugs.⁶ However, because benzodiazepines cause anger outbreaks in some patients, these drugs have been suggested to be used at low doses if needed.⁶ Various studies have questioned whether there is a history of bipolar disorder primarily in the IED treatment process.⁹ In cases where there is no history of bipolar disorder and patients do not have severe aggression, it is suggested to begin treatment with selective serotonin reuptake inhibitors; otherwise, mood stabilizers should be the first choice.⁹ Among the mood stabilizers, carbamazepine has been found to have a positive effect on aggressive patients, especially those with severe anger outbursts due to an underlying organic disorder.⁶ One study compared carbamazepine with propranolol therapy in a group of patients with anger outbursts and concluded that both carbamazepine and propranolol were equally effective, and carbamazepine was more effective in patients with IED.¹¹

In our present case, the patient, who did not respond to many pharmacological treatments, showed dramatic improvements with carbamazepine treatment despite not having a history of bipolar disorder. Future studies to be done in this regard in children and adolescents will shed light on possible clinical treatments.

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