Attention-Deficit Hyperactivity Disorder-Associated Impulsive Aggression Treated With Lamotrigine

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**To the Editor:**

Aggression in attention-deficit hyperactivity disorder (ADHD) is a disuniform phenomenon that affects roughly half of all cases. Although aggression may resolve by treating the underlying ADHD, 44%–50% of patients still continue to suffer from clinically significant aggression even after treatment. These symptoms are often difficult to characterize due to high rates of psychiatric comorbidity in ADHD, but the majority are believed to be impulsive aggression (IA), characterized by externalization of anger, spontaneity, and lack of premeditation with an episodic onset.

We examine the case of a 30-year-old white woman with ADHD and associated IA. Her ADHD symptom onset was preadolescent and she was tried on several stimulant medications throughout childhood. Concurrently, the patient manifested a history of what she described as “rage fits” where she would impulsively break things, become “overwhelmed with frustration,” and shout. These episodes would come about twice weekly and last 2–3 hours at most. When primary treatment of ADHD failed to mitigate them, she was ultimately misdiagnosed with childhood bipolar disorder. Trials of valproic acid and aripiprazole in addition to clonazepam were attempted in her late teens and early 20s, which failed to treat these fits, despite her ADHD being successfully treated with dextroamphetamine-amphetamine, 30 mg twice daily. Ultimately, at our clinic, she was started on lamotrigine (LTG) and titrated up to 100 mg with complete symptom resolution. Notably, the patient did have an isolated “rage fit” during a period where she missed 2 days of LTG in our care.

IA comprises the single largest aggression subtype for ADHD, up to 80% in pediatric populations, and produces poorer outcomes for patients in no small part due to resultant social rejection. Although not stemming from premeditation, the alienation could manifest in maladaptive behaviors, resulting in the development of ill-favored characterological traits. Given the ubiquitous nature of impulsivity in many psychiatric disorders, it is often a diagnosis of exclusion and may be confounded by other disorders. The majority of literature on IA deals with the pediatric population, and despite adult ADHD prevalence being conservatively 4.4% with significant psychiatric comorbidity, research lags behind. A 2010 study limited to men found that ADHD in adulthood was predictive of IA, but also showed significant symptom overlap with borderline personality disorder.

A thorough assessment and chart review reveal that our patient had neither met criteria for bipolar disorder nor borderline personality disorder, both of which can present with similar symptom manifestations. Likewise, in childhood, the patient had never been appreciated to have an oppositional defiant disorder or conduct disorder, and her behavioral aberrations were confined to periodic episodes, resolving with complete insight. Thus, we believe our patient to have a pure manifestation of IA.

In the literature, LTG has been used for treatment of aggression. It was used to treat aggression in borderline personality disorder in a 2005 and 2008 follow-up study that demonstrated clinically significant reduced aggression in adult females. It has likewise been shown of utility in temporal lobe epilepsy-associated aggression and in one case of posttraumatic stress disorder-mediated aggression. It is hypothesized to mechanistically prevent the release of glutamate through its function as a voltage-gated sodium channel blocker, a neurotransmitter associated with aggressive behavior. Given the paucity of information present on treating IA, especially in adult populations, we believe lamotrigine may prove a safe long-term medication to augment primary ADHD treatment.

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The authors have no conflicts of interest to declare.
REFERENCES


