Resolution of Anxiety Symptoms in Response to Stimulants in a Patient With Attention-Deficit/Hyperactivity Disorder and Generalized Anxiety Disorder

To the Editor: Attention-deficit/hyperactivity disorder (ADHD) can cause significant impairment in adults and occurs as a continuation of its childhood counterpart in about a third of those with childhood ADHD.[1] Adult ADHD usually presents with comorbid disorder including anxiety disorders and depression, and ADHD symptoms are often mistaken for those of their comorbidities.[2]

Case report: Ms A is a 31-year-old white woman who was referred by her primary care physician to our stress, anxiety, and trauma clinic in November 2015 with the chief complaint of anxiety, as well as inattentive ADHD on the basis of psychological testing. Her anxiety started when she was surprised by a pregnancy at age 17 years, which overstressed the patient and her family. Since the pregnancy, she was always anxious and worrying "about everything." She avoided going to the gym because she was worried people might judge her appearance. Ms A avoided going to a large city, where she felt unsafe, and would feel extremely anxious in crowded places. The patient's mother always thought her daughter had ADHD, but Ms A was never tested during childhood.

The patient was shaking her legs during the visit and noted restlessness, forgetfulness, poor concentration, and losing things. Ms A was diagnosed with generalized anxiety disorder (GAD) and ADHD-inattentive type (*DSM-5* criteria). We decided to use antidepressants, as they have been found effective in the treatment of anxiety and adult ADHD.[3] Ms A could not tolerate sertraline 12.5 mg due to drowsiness, fluoxetine 5 mg due to restlessness, citalopram 5 mg due to gastrointestinal side effects, or escitalopram 2.5 mg due to dizziness. The patient did not fill a prescription for mirtazapine because of concerns about the potential side effect of weight gain, and she was not interested in psychotherapy for anxiety. During this time, stimulants were avoided due to the fear that they would worsen her anxiety symptoms.

After reviewing potential side effects, we agreed to try a stimulant. At this time, Ms A answered all questions on the Adult ADHD Self-Report Scale[4] in the gray zone (suggestive of ADHD) and scored 14 on the 7-item Generalized Anxiety Disorder questionnaire (GAD-7)[5] and 7 on the 9-item Patient Health Questionnaire (PHQ-9).[6] Methylphenidate 5 mg was prescribed and titrated to 20 mg daily.

During the next few visits, Ms A reported "80%" improvement in her restlessness, poor concentration, and anxiety symptoms. At this time, she was not afraid to visit a nearby large city and was able to regularly go to the games, museums, and Sunday market in the city with her friends. Because of the loss of effects of the medication during the day, methylphenidate was eventually replaced with dextroamphetamine-amphetamine, and the daily dose was optimized at 25 mg. At this time, she scored 1 on the PHQ-9 and 1 on the GAD-7. A year after starting the stimulant, she was going to the gym regularly, had lost 15 lb, and received a promotion at work.

While anxiety specialists tend to avoid prescribing stimulant medications due to potential negative effects on anxiety, use of these medications seems justified in patients who cannot tolerate antidepressants or in those whose ADHD symptoms do not respond to those medications. Interestingly, Ms A's anxiety symptoms responded to stimulant medication. Her GAD-7 score declined from 7 to 1, and she was able to go to places that previously terrified her and that she used to avoid. Improvement in threat detection could be a possible mechanism for the observed effect. A patient with anxiety is continuously scanning for threat in the internal and external environment (eg, in the city), and inattention and inability to concentrate may worsen anxiety, as it can impair this threat detection process. Alternatively, it has been suggested that improvement in anxiety could be due to the reduced number of anxiety-provoking situations and conflicts that untreated ADHD can cause, such as impaired occupational or interpersonal function.[7] We recommend fully addressing the ADHD symptoms in patients with anxiety disorder, while maintaining caution with regard to the potential negative effects of stimulants on anxiety.

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