Bupropion-Associated Withdrawal Symptoms: A Case Report

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Withdrawal symptoms associated with the cessation of therapy have been widely described for most antidepressants. The authors report irritable mood, anxiety, sleeplessness, headache, and generalized aches and pains associated with the abrupt discontinuation of bupropion treatment in a 32-year-old man being treated for nicotine dependence. The authors recommend a slow taper for antidepressant discontinuation, along with vigilance for withdrawal symptoms and educating patients to the benefits of compliance.

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Discontinuation symptoms following cessation of antidepressant medication therapy are widely described in the literature.[1] The discontinuation symptoms are associated with most antidepressants including tricyclic antidepressants (TCAs), monoamine oxidase inhibitors (MAOIs), and selective serotonin reuptake inhibitors (SSRIs).[2] Published reports also describe withdrawal symptoms following cessation of venlafaxine,[3] nefazodone,[4] and mirtazapine.[5] We describe withdrawal symptoms associated with abrupt discontinuation of bupropion, which, to our knowledge, have not been previously described in the literature.

CASE REPORT

Mr. A, a 32-year-old man who had a 12-year history of smoking 1 pack per day, was diagnosed with DSM-IV nicotine dependence and enrolled in a tobacco cessation program. He suffered from no psychiatric illness and was in good physical condition despite his nicotine habit. At the time of his enrollment into the tobacco cessation program, he admitted to an occasional glass of wine with dinner, 1 or 2 cups of coffee in the morning, and no use of illicit substances. He was not taking any prescription medications but took an occasional ibuprofen for minor aches and pains.

Mr. A had made at least 4 attempts to quit in the previous 2 years by abrupt cessation (cold turkey). No attempt lasted more than 3 days, with Mr. A citing "stress" as the reason for his lack of success. As part of the tobacco cessation program, he participated in group behavioral modification sessions and started a course of bupropion sustained-release (SR), 150 mg/day, for the first 3 days, increased to 150 mg b.i.d. to be taken for 10 weeks. By day 3, he noted a decrease in his nicotine cravings and did not report any adverse effects associated with bupropion. Mr. A quit smoking 3 weeks after starting bupropion as per his self-disclosure in the group setting that coincided with week 2 of a total of 4 sessions of face-to-face counseling. He completed the 4 one-hour sessions and was to take bupropion for 4 more weeks and taper off over the last week, taking 150 mg one time per day and then stopping the medication. Sometime during the eighth week after initiating bupropion therapy, he inadvertently stopped his medication with no apparent immediate problems. However, about 5 days after stopping the medication, he noticed an irritable mood, an anxious feeling, an inability to sleep, headache, and generalized aches and pains. The patient, thinking he had the flu, went to see his primary care physician. His physician also felt he had the flu and recommended he stay home from work, thereby missing a day and a half of work.

In a routine telephone follow-up call made as part of the tobacco cessation program, Mr. A explained his constellation of symptoms and was asked to come in for follow-up. At that time, he had been tobacco-free for approximately 8 weeks. A review of his medical record from a recent visit to his primary care physician showed that results of a complete blood count, chemistry 10, and urine analysis were all within normal limits, and his vital signs were unremarkable. Thinking that these symptoms could be related to the abrupt withdrawal of bupropion, we decided to restart bupropion SR at 150 mg/day. By 36 hours, the patient's symptoms had resolved and he tapered off bupropion SR, taking 150 mg/day for 4 days followed by 150 mg every other day for 8 days (4 total doses) and 150 mg every third day for 6 days (2 total doses) without further complications. Mr. A remains tobacco free at 7 months, again based on his honest self-disclosure.

DISCUSSION

It is known that sudden and even tapered withdrawal from antidepressants can cause a variety of somatic and psychological symptoms.[6] Although the exact mechanism is not known, it is postulated that the discontinuation phenomena may be due to decreased availability of synaptic serotonin and that other neurotransmitters such as dopamine, norepinephrine, and γ-aminobutyric acid (GABA) may be involved, as well as cholinergic rebound.[7] Although bupropion has no effect on the serotonin system and lacks anticholinergic activity, its mechanism of action, mediated through the dopaminergic and noradrenergic systems,[8] may have contributed to our patient's discontinuation symptoms. Pollock[1] states that all SSRIs should be gradually tapered to minimize the possibility of discontinuation symptoms. On the basis of our experience, until the discontinuation or withdrawal syndrome is more clearly defined, we recommend a slow taper of the antidepressant during discontinuation, regardless of the half-life or mechanism of action. As more physicians prescribe antidepressants for a myriad of clinical entities, they need to remain alert for withdrawal symptoms and work in educating patients to the possibility of discontinuation symptoms. This type of education will not only increase compliance but also decrease the abrupt discontinuation of antidepressants by patients.

Drug names: bupropion (Zyban), ibuprofen (Motrin and others), mirtazapine (Remeron), nefazodone (Serzone), venlafaxine (Effexor).

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