Bupropion-Induced Stuttering

To the Editor: *Stuttering* is defined as frequent occurrences of sound and syllable repetitions, sound prolongations, interjections, broken words, audible or silent blocking, circumlocutions, words produced with an excess of physical tension, and monosyllabic whole-word repetitions.[1] Stuttering should be classified as a disorder only if its severity is such as to markedly disturb the fluency of speech. Stuttering is usually developmental, but, in rare cases, it may be acquired in adulthood as the result of a neurologic event such as a head injury, tumor, stroke, or drug use.[1] Some drugs that have been reported to cause stuttering are antipsychotics, antidepressants, mood stabilizers, and others.[2,3] Bupropion is an effective antidepressant, and stuttering due to the drug has not been reported.[4] There is only 1 previously reported case of stuttering due to bupropion[5] in which the patient remitted after discontinuation of the drug, but no rechallenge was given. In the present case, stuttering disappeared after discontinuation of bupropion and reappeared on rechallenge.

Case report. Mr A, a 38-year-old married man, presented to the hospital with complaints of sad mood, loss of interest in surroundings, hopelessness and worthlessness, lethargy, heaviness in head, decreased appetite and sleep, loss of libido, and crying spells increasing gradually for the last 6 weeks. There was no past or family history of a psychiatric disorder. He was a college graduate and had a history of occasional smoking. The mental status examination revealed psychomotor retardation and sad mood. Speech was normal in rate and volume with increased reaction time. There were ideas of hopelessness and worthlessness. Mr A was diagnosed with major depressive disorder (*DSM-IV* criteria).

The laboratory investigations including routine hematology, blood sugar, liver, and renal and thyroid function tests as well as computed tomography scan (head) were normal. Mr A was started on tablet bupropion slow release 150 mg daily. After 2 weeks, he reported mild improvement. The dose was increased to 300 mg daily. After 2 days of the increased dose, he reported decreased, labored, and pressured speech. There were involuntary silent pauses or blocks and repetitions and prolongations of sounds, syllables, and words. Rhythm of speech was also affected. Mr A's wife reported that the increased dose of bupropion had resulted in his speech problem, which he had not experienced previously. There was no disorientation or unconsciousness during stuttering.

Bupropion was stopped immediately, and there was instant improvement in his speech problem. Normal rhythm of speech was restored and intensity normalized. Rechallenge with bupropion 150 mg after 1 week caused stammering and was stopped immediately.

The role of several neurotransmitters such as γ-aminobutyric acid, serotonin, and dopamine has been proposed in the pathogenesis of stuttering. Bupropion's ability to increase dopamine in the frontal cortex was suspected to have been involved in this patient's stuttering.[5]

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