Mirtazapine-Induced Epistaxis in an Australian Indigenous Man

To the Editor: It is well known that serotonin reuptake inhibitors (SSRIs) can cause abnormal bleeding by decreasing the availability of serotonin within the platelet and, in turn, inhibiting platelet aggregation and blocking the coagulation cascade.[1] If there is a risk of abnormal bleeding, mirtazapine and bupropion are generally considered to be safer treatment options because they lack the serotonin reuptake mechanism.[2] We present the case of an 18-year-old North Australian indigenous man, with no prior history of bleeding disorder, who developed frequent epistaxis after starting mirtazapine.

Case report: An 18-year-old man was admitted to the hospital during the first episode of major depressive disorder (*DSM-5* criteria). He was successfully treated with mirtazapine 30 mg and discharged home with a plan for a follow-up visit at a local mental health clinic. At follow-up 4 weeks later, he complained of experiencing 6 episodes of epistaxis since discharge from the hospital. He denied any trauma to the body and had no personal or family medical history of bleeding disorders or nasopharyngeal pathology. He was not taking any other medication, including herbal products or health supplements. After completing a detailed medical history and a thorough physical examination, it was established that mirtazapine was the likely cause of the bleeding. He was advised to stop taking mirtazapine. In the following 4 weeks, he had only 1 more bleed, which occurred 2 days after stopping the medication. Weekly sessions of cognitive-behavioral therapy were continued at the clinic for residual depressive symptoms.

Mirtazapine is an antagonist at the α_2-adrenergic autoreceptor and heteroreceptor and 5-HT_2 and 5-HT_3 receptors. It is possible that the blockade of the 5-HT_{2A} receptor increases bleeding risk by decreasing platelet aggregation.[3]

In the above-mentioned case, there were no identifiable preexisting risk factors for abnormal bleeding with mirtazapine therapy. Although epistaxis is mentioned as an infrequent side effect in the prescribing information for mirtazapine,[4] it is often a favored medication in consultation-liaison psychiatry because of its perceived safety with regard to bleeding disorders. Mirtazapine is often prescribed to surgical patients or others at risk for bleeding disorders. Mindful prescribing behavior, education of patients, and careful monitoring for specific side effects including risk of bleeding are good clinical practices when prescribing mirtazapine. The exact causation between non-SSRI antidepressants and bleeding is not yet fully understood. Larger-scale studies controlling for confounding factors are necessary to establish a correlation between mirtazapine and abnormal bleeding.

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