

Varenicline may induce psychotic symptoms in subjects without previous history of psychiatric disorders

Varenicline is a partial agonist of the $\alpha 4\beta 2$ nicotinic acetylcholine receptor, which has recently been introduced as a treatment for smoking cessation. It is increasingly prescribed by psychiatrists and general practitioners (GPs). Several cases, though, have been reported of varenicline leading to exacerbations of psychotic symptoms in patients with psychiatric antecedents (1–4). We report what is to our knowledge the first case of psychotogenic effects of varenicline in a female patient with no psychiatric history.

Mrs A, a healthy 42-year-old female nurse with no psychiatric history, who had smoked an average of 30 cigarettes/day since age 18, consulted her GP requesting medical assistance for smoking cessation. After informed consent, she was prescribed varenicline, 0.5 mg/day for the first 3 days, then, 0.5 mg/day up to the 7th day, and 1.0 mg/day thereafter. During the first 3 days, the patient experienced increased and vivid dreaming. She especially reported remembering much more from her dreams than she was used to. Concerning smoking, she reported having effortlessly reduced her consumption down to 3 cigarettes/day.

Subsequent to the dose increase from day 4 to 7 she experienced a significant mood worsening, as well as concentration difficulties. She reported significant mood labilities eventually leading to domestic conflicts with her partner. Additionally she found herself struggling with usually easy tasks (e.g. picking up children from

school), and increasingly suffered from muscular and articular pains upon waking.

In the afternoon of the 9th day (i.e. 1 day after dose augmentation to 1 mg b.i.d.), she complained about highly distressing visual hallucination (insects moving around on the ground), which she had never experienced in the past, and which persisted for more than 3 h. In agreement with her GP, it was therefore decided to discontinue the treatment.

For subsequent nights she again reported periods of increased and vivid dreaming. However, no further hallucinations appeared. Also, the mood alterations gradually faded over the next week. Five days after varenicline cessation, she relapsed to smoking 1 packet/day.

Six months later, and in accordance with her GP, she retook a varenicline treatment, using the same treatment protocol. Once again, varenicline had to be discontinued at the end of the 4th day because of the reappearance of negative mood and the patient fearing the re-emergence of hallucinations.

This is to our knowledge the first report of psychotogenic effects of varenicline in a patient with no psychiatric history.

While a simple withdrawal phenomenon independent from varenicline cannot be ruled out, it seems less likely, as hallucinations not being part of a usual nicotine withdrawal. One open question remains about the correlation between increased dreaming activity and hallucinations. Increasing dreaming has been reported for nicotine withdrawal (5). As the presented patient had experienced previous nicotine withdrawals without the symptoms described in the present report, a correlation with varenicline seems more probable.

In conclusion, while varenicline represents an interesting new therapeutic alternative in the treatment of nicotine dependence, caution is warranted regarding the appearance of psychotic symptoms not only in patients with a history of psychosis.

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References

1. LYON GJ. Possible varenicline-induced paranoia and irritability in a patient with major depressive disorder, borderline personality disorder, and methamphetamine abuse in remission. *J Clin Psychopharmacol* 2008;**28**:720–721.
2. FREEDMAN R. Exacerbation of schizophrenia by varenicline. *Am J Psychiatry* 2007;**164**:1269.
3. KOHEN I, KREMEN N. Varenicline-induced manic episode in a patient with bipolar disorder. *Am J Psychiatry* 2007;**164**:1269–1270.
4. PUMARIEGA AJ, NELSON R, ROTENBERG L. Varenicline-induced mixed mood and psychotic episode in a patient with a past history of depression. *CNS Spectr* 2008;**13**:511–514.
5. HUGHES JR. Effects of abstinence from tobacco: valid symptoms and time course. *Nicotine Tob Res* 2007;**9**:315–327.