Psychopharmacology for the Clinician
Psychopharmacologie pratique

The information in this column is not intended as a definitive treatment strategy but as a suggested approach for clinicians treating patients with similar histories. Individual cases may vary and should be evaluated carefully before treatment is provided.

Smoking cessation: the psychiatrist's role

Although tobacco use is one of the leading preventable causes of death and the prevalence of smoking in persons with psychiatric disorders is very high, psychiatrists may be missing opportunities to assist patients to stop smoking, perhaps because this health promotion activity is seen to be in the province of the family physician.[1] We may be consulted, however, when patients with psychiatric disorders consider smoking cessation or have difficulty in achieving abstinence.

A patient with bipolar disorder resolved to stop smoking after experiencing several upper respiratory infections. He was a heavy smoker with a high Fagerström nicotine dependence score (8).[2] His mood was well stabilized by treatment with lithium carbonate, and his only other medication was atorvastatin.

The patient decided on a quit date and started to exercise regularly, to avoid smoking while away from the house and to use nicotine gum 4 mg as needed. With this strategy, his consumption went from over 30 cigarettes daily to about 10 daily; he had no problems apart from cravings for cigarettes. A couple of weeks before the quit date and wishing to further reduce his intake of cigarettes, he saw his family physician, who prescribed varenicline according to the usual schedule (0.5 mg/d initially, increasing to 2 mg/d over 1 week). After starting the varenicline, the patient developed several significant symptoms, many attributable to acute nicotine withdrawal: sadness, difficulty thinking and executing actions, poor energy, and somatic sensations including "kinks in (his) body" and burning eyes. He felt as though he had taken a pill with residual effects that included his head not being clear and an "unnatural feeling." Cigarettes failed to relieve these symptoms, and the usual feeling of satisfaction from smoking was lacking.

He was seen in the clinic after 10 days of treatment with varenicline. It was decided that he would discontinue this medication and attempt to quit as originally planned. His mood and ability to function returned to normal about 4 days after stopping the varenicline, by which time all the symptoms mentioned above had resolved. The patient was subsequently able to stop smoking completely (at the time of writing for 3 weeks) with the aid of the nicotine replacement therapy (NRT).

Varenicline is a partial agonist at the $\alpha_4\beta_2$ nicotinic acetylcholine receptor, which is the main site of action of nicotine. Like NRT and bupropion, the use of varenicline increases the rate of complete smoking cessation by a factor of about 2 to 3. These pharmacologic aids are best employed in conjunction with various nonpharmacologic approaches, including counselling and strategies such as making the home smoke-free and exercising regularly. Bupropion is relatively contraindicated in patients with bipolar disorder, given that it can cause mood cycling. Varenicline appears to be quite safe for use in patients with psychiatric illnesses, but there have been reports of exacerbation of schizophrenia and induction of hypomania, or even mania, following treatment with this drug.[3-5]

Smoking cessation is a risk factor for the development of depression, but the timing of this patient's symptoms suggests a withdrawal syndrome resulting from an acute reduction in stimulation of the $\alpha_4\beta_2$ nicotinic acetylcholine receptors after the introduction of varenicline. Occupancy of the nicotinic receptors by this high-affinity drug also accounts for the failure of smoking to relieve the symptoms or produce a positive effect.

NRT, bupropion and varenicline can be used in combination, and other drugs can also be employed as aids to smoking cessation. A review of these treatments and other aspects of this important field can be found in an excellent article published in the November 2007 issue of the *CMAJ*[6] (cited in bibliography for the online version of this column appearing on the *JPN* website). NRT in its various forms (patch, gum, etc.) should, in my opinion, be considered the initial drug of choice for smoking cessation, with the other drugs being reserved for cases in which NRT is not tolerated or is ineffective, particularly in patients with psychiatric comorbidity.

Assisting patients to stop smoking can be highly rewarding, and the more informed we are about developments in this important field, the more effective we will be in helping our patients.

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Psychopharmacology for the Clinician columns are usually based on a case report that illustrates a point of interest in clinical psychopharmacology. They are about 500–650 words long and do not include references. Columns can include a bibliography which will be available only at the journal website and can be accessed through a link at the bottom of the column. Please submit appropriate columns online at http://mc.manuscriptcentral.com/jpn; inquiries may be directed to jpn@cma.ca.

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