Depression After Smoking Cessation: Case Reports

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Background: Cigarette smokers with a history of major depression are at risk for developing depressive mood when they attempt cessation. Whether cessation can also provoke more severe depressions, however, has not been well documented.

Method: Six case reports of severe depressive episodes after smoking cessation are described.

Results: Four cases occurred among smokers with a history of major depression but who were not depressed at the time of cessation. Two cases involved smokers with no previous history of major depression. Variability in both the timing and the outcome of the postcessation depressions was observed.

Conclusion: The risk that depressive states may emerge or be exacerbated after smoking cessation, particularly in patients with a history of major depression, must be kept in mind in the treatment of nicotine dependence.

(J Clin Psychiatry 1996;57:467–469)

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Supported in part by grant DA04732 from the National Institute for Drug Abuse by an Established Investigator Award from the National Alliance for Research on Schizophrenia and Depression and by a grant from Suzanne C. Murphy (Dr. Glassman).

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Evidence exists that cigarette smokers with a history of major depression, even when they are not depressed prior to cessation, are likely to develop depressive symptoms when they try to stop smoking.[1] Although depression was not listed as a smoking withdrawal symptom in DSM-III-R, Covey et al.[1] found that 75% of smokers with a history of major depression developed depressive symptoms during withdrawal compared with only about 30% among smokers free of such history. Moreover, depressive symptoms were significantly more severe in the group with a history of depression.[1] If these depressive symptoms were merely like other withdrawal symptoms and fade over a few weeks, they would be of little interest to the clinician. However, there have been reports that patients with a history of major depression who succeed in stopping smoking are at increased risk to develop severe depression[2–4] and that this depression can persist.[2] The following vignettes were chosen from a number of such experiences to illustrate the variability in both time of onset and outcome of depressive symptoms that emerged after smoking cessation. None of the four cases with a history of major depression were depressed at the time they initiated their cessation efforts and had not been for an average of 4 years. Examples are also given of two patients without a history of major depression who developed severe depressive symptoms after smoking cessation. While all the examples given here were female patients, we have previously reported the occurrence of major depression after smoking cessation in a male smoker.[2]

CASE REPORTS

Smokers With a History of Major Depression

Case 1. Ms. A, a 44-year-old woman with a history of one major depressive episode, smoked 25 cigarettes/day for 28 years. She sought help for her smoking and received counseling in connection with cessation efforts. She stopped smoking, but within the first 24 hours, she developed severe depressive symptoms including suicidal ideation and severe anxiety. She was unable to go to work. After 2 days, she resumed smoking 25 cigarettes/day, and within a few days, her depressive symptoms resolved completely.

Case 2. Ms. B, a 24-year-old woman with a past history of recurrent major depression, had smoked 35 cigarettes/day for 10 years. She received counseling in connection with smoking cessation and successfully stopped smoking. After 2 weeks of abstinence, she began to experience dysphoric mood, disturbed sleep, feelings of worthlessness, concentration difficulty, decreased appetite, and increased fatigability. These symptoms persisted for another 2 weeks, at which time she resumed smoking 30 cigarettes/day. Her depressive symptoms vanished gradually over the next week.

Case 3. Ms. C, a 68-year-old woman with a history of bipolar disorder, had been undergoing lithium therapy for 30 years. Because of stability in her bipolar disorder over

the last 10 years, the lithium treatment was stopped. Five months after discontinuing lithium therapy, she was still feeling well and decided to seek help for smoking cessation. She received counseling and successfully stopped. After 6 weeks without smoking, and 6½ months after stopping lithium, she became increasingly irritable and depressed. She again started smoking, and the symptoms vanished within a week.

Case 4. Ms. D, a 42-year-old woman who smoked 30 cigarettes/day and had a history of one major depressive episode, sought help to quit smoking. She received counseling and pharmacotherapy with 0.15 mg of clonidine per day. Five days after quitting smoking, she began to experience sadness, loss of pleasure, and diminished energy and started smoking again. In spite of 2 weeks of regular smoking, her depressive symptoms remained unchanged, and she was treated with fluoxetine 40 mg/day. She recovered completely in 4 weeks while taking fluoxetine and smoking. She stopped fluoxetine treatment after 6 months, and since then, she has neither been depressed nor has she tried to stop smoking.

Smokers Free of Prior Major Depression

Case 1. Ms. E, a 46-year-old woman with no personal or family history of any psychiatric illness, smoked 40 cigarettes/day for 22 years. She successfully stopped smoking with the aid of counseling but without the use of medication in a smoking-cessation clinic. Six weeks after quitting, she experienced marked feelings of lethargy, loss of energy, depressed mood, and was unable to go to work. She started smoking again, and her depressive symptoms, appetite disturbance, and inability to work disappeared within a few days.

Case 2. Ms. F, a 39-year-old woman with no history of major depression, came to the clinic and successfully stopped smoking. During the next few weeks, she developed clear depressive symptoms and again started smoking. In spite of smoking, she experienced a full-blown episode of major depression and was referred to psychotherapy. Psychotherapy was without effect, and after 6 months, she started pharmacotherapy. In the following 3 years, she was treated with desipramine, phenelzine, tranylcypromine, amitriptyline, fluoxetine, isocarboxazid, and bupropion with little or no effect. Augmentation of lithium, triiodothyronine, and dextroamphetamine was also without effect. She received bilateral electroconvulsive therapy, which provided only short-term relief. Three years after her first depressive symptoms, she was still depressed and still smoking.

DISCUSSION

The connection between smoking cessation and major depression is important for clinicians because patients with a history of major depression are less likely to be able to stop smoking,[2] and if they stop, they are more likely to become depressed.[1] As more people stop smoking, an increasing percentage of those who remain smokers will be psychiatric patients, particularly those with depressive disorder.[5,6] Four studies conducted in the specialized setting of university-based smoking clinics observed a 30% to 35% prevalence of past major depression among their subjects. (references 4, 7, and 8 and Goldstein M. 1996. Personal communication). We have data suggesting that among smokers with past major depression who are successful in abstaining from cigarettes, about 20% develop serious depression during a 12-week treatment period.[7] We have also seen that among patients with bipolar disorder, the chance of developing a severe depression is even higher.[4]

Many patients who become depressed after withdrawal from nicotine immediately return to smoking and experience relief from the depression; among those who remain off cigarettes, a significant proportion will experience a full-blown episode of major depression.[9] It seems likely that for some depressed patients, nicotine acts as a prophylactic agent that serves to avoid the emergence of depressive states.[10] This may be one of the reasons why smokers with a history of major depression are prone to relapse early when they try to stop smoking compared with smokers without such history.[9]

The period of vulnerability to these serious depressive states after nicotine withdrawal is uncertain. It may occur within a few days up to weeks after smoking cessation. However, in two of the cases we report, the depressions did not occur until 6 weeks after cessation. In spite of this long delay in onset, the depressions quickly disappeared when the patient returned to smoking. While much more remains to be known about the depressive sequelae of smoking cessation, our clinical observations indicate the importance of obtaining information about depression history and, when such a history is present, remaining alert to the possible onset of depression even weeks after smoking cessation treatment has ended.

Another aspect on this issue is that patients with either depressed mood and/or major depression have a higher mortality rate[11,12] than individuals without depression. If these patients also are smokers, their risk of dying more than doubles.[13] Although this group has an urgent need to quit smoking, the risk of new depression when they quit smoking makes them likely to relapse.[4] As yet, no proven treatment exists for the refractory smoker with a history of depression. We have pilot data suggesting that antidepressants, e.g., fluoxetine and sertraline, may be a useful cessation aid for these smokers. Additionally, preliminary data by Ferry and Burchette[14] and Hall[15] from nondepressed smokers suggest that antidepressants may work as smoking cessation aids for a broad spectrum of smokers. The adequacy of nicotine replacement therapy for patients with a history of major depression is a possible approach that needs to be tested.

The relationship between smoking, smoking cessation, and depression must be kept in mind when patients present with depressive symptoms or when patients with a history of major depression want to stop smoking. Furthermore, the risk that depressive states may emerge or be exacerbated after smoking cessation by some patients is an additional factor that should be considered in treatment settings where smoking has been banned. The best course for these patients has not yet been determined, but with ongoing studies, we hope to be able to shed more light on this problem.

Drug names: amitriptyline (Elavil and others), bupropion (Wellbutrin), clonidine (Catapres), desipramine (Norpramin and others), dextroamphetamine (Dexedrine and others), fluoxetine (Prozac), isocarboxazid (Marplan), phenelzine (Nardil), sertraline (Zoloft), tranylcypromine (Parnate), triiodothyronine (Liothyronine).

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