

# PharmaCE™

a continuing education program for *JPT* readers

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## January/February CE Questions

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### ACCREDITATION

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## VARENICLINE

(see page 23)

### Goal

To present the pharmacology, clinical efficacy, and safety of varenicline.

### Objectives

After reviewing this article, the reader should be able to:

1. describe the mechanism of action of varenicline and compare it with existing pharmacotherapy options for smoking cessation;
2. given a case study of a patient requesting therapy for smoking cessation, distinguish factors that should be taken into consideration when recommending therapy with varenicline;
3. counsel a patient regarding dosing, adverse effects, and drug interactions with varenicline; and
4. identify patients in whom varenicline may be a viable option for therapy for smoking cessation.

### Test Questions

1. According to the 2010 national health objectives, the goal for the prevalence of smoking is less than which of the following percentages?
  - (a) 25%
  - (b) 22%
  - (c) 15%
  - (d) 12%
2. Nicotine replacement therapy helps to reduce withdrawal symptoms by which of the following mechanisms?
  - (a) stimulation of cortisol release
  - (b) stimulation of dopamine release
  - (c) inhibition of dopamine release
  - (d) Nicotine replacement therapy does not reduce withdrawal symptoms.
3. According to the 2000 Tobacco Use and Dependence Clinical Practice Guidelines, which product may be recommended as a first-line agent for tobacco use disorders?
  - (a) bupropion
  - (b) clonidine
  - (c) fluvoxamine
  - (d) nortriptyline
4. Which nicotinic acetylcholine receptor has the highest sensitivity to nicotine and is dominant in the central nervous system?
  - (a)  $\alpha_3\beta_2$
  - (b)  $\alpha_4\beta_2$
  - (c)  $\alpha_7$
  - (d) None of the subunits are in the central nervous system.
5. A 49-year-old female will start varenicline therapy tomorrow. She used nicotine transdermal patches in the past and would like to know when she needs to stop smoking in relation to taking varenicline. What is your response to this patient?
  - (a) As with the patches, she should stop using tobacco immediately before starting varenicline therapy.
  - (b) As with bupropion therapy, she can continue to smoke during the first 4 weeks of varenicline therapy.
  - (c) Varenicline therapy should be initiated one week before the chosen quit date.
  - (d) Varenicline can be started only after the patient has stopped smoking for 4 weeks.
6. A 29-year-old male would like to stop smoking; he is currently taking cimetidine. His physician knows that cimetidine interacts with many other drugs and asks you whether varenicline therapy can be used in combination with cimetidine. Which of the following is the most appropriate response?
  - (a) Cimetidine can decrease varenicline concentrations; therefore, a higher initial varenicline dose is recommended.
  - (b) Cimetidine can increase systemic concentrations of varenicline; therefore, the varenicline dose should be reduced by 75%.
  - (c) Cimetidine concentrations can be reduced; therefore doubling the cimetidine dose is warranted.
  - (d) Cimetidine can increase systemic concentrations of varenicline; however, the manufacturer does not believe that the reduction is clinically relevant and recommends that the dosage should not be adjusted.

Questions 7–11 refer to the following case:

A 56-year-old man is interested in quitting smoking for health reasons. He currently smokes 2 packs per day and has been a smoker for approximately 35 years. He tried to quit once approximately 10 years ago with the nicotine patch while he was on vacation. He did not smoke while he used the patch for 2 weeks, but went back to smoking when he returned to work. He is retired now and would like to try to quit again. He has had various respiratory viruses in the past couple of years and has a seizure disorder that is controlled with carbamazepine.

7. Which of the following statements regarding the therapeutic options for this patient is true?
  - (a) Varenicline should not be used due to the history of seizures.

**Answer sheet appears on facing page.**

- (b) Bupropion should not be used due to the history of seizures.
  - (c) The nicotine patch should not be used due to the history of seizures.
  - (d) The nicotine patch should not be used due to previous treatment failure.
8. The patient understands that the nicotine patch was providing nicotine to decrease his withdrawal symptoms, but he wonders how an oral tablet with no nicotine will help him. Which of the following is a correct explanation?
- (a) Varenicline works due to a placebo effect.
  - (b) Varenicline contains nicotine to decrease withdrawal symptoms.
  - (c) Varenicline is thought to affect serotonin levels to decrease symptoms of depression, which is linked to smoking.
  - (d) Varenicline is thought to increase dopamine concentrations similar to nicotine to decrease withdrawal symptoms.
9. Which of the following dosing strategies should be recommended for this patient?
- (a) Begin 1 week prior to the quit date with 0.5 mg daily for 3 days, followed by 0.5 mg twice daily for 4 days, then begin taking 1 mg twice daily on the quit date for 12 weeks.
  - (b) Begin 1 week prior to the quit date with 0.5 mg twice daily for 1 week, followed by 1 mg twice daily on the quit date for 12 weeks.
  - (c) Begin with 0.5 mg twice daily on the quit date. Increase to 1 mg twice daily 1 week after the quit date and continue for 12 weeks.
  - (d) Begin with 1 mg twice daily on the quit date. If adverse effects occur, the patient may decrease the dose to 0.5 mg twice daily.
10. Which of the following are the most common adverse events that the man should be counseled on before taking varenicline?
- (a) increased seizure activity and nausea
  - (b) increased seizure activity and insomnia
  - (c) nausea and insomnia
  - (d) insomnia and liver dysfunction
11. The patient returns 1 week after his quit date complaining of nausea. Which of the following is the best recommendation?
- (a) The nausea likely occurred because he continued to smoke with the varenicline. He should stop smoking.
  - (b) He should discontinue varenicline immediately.
  - (c) He should start the dosing regimen over again, as if he had not been taking the medication.
  - (d) He should decrease the dose to 1 mg daily.
12. A physician requests a recommendation for a smoking cessation product for a 59-year-old male patient without significant medical issues. Only bupropion SR, varenicline, and nicotine gum are on the formulary. Which of the following would be the most appropriate recommendation?
- (a) Varenicline should be used because it has been shown to be superior to nicotine replacement patches.
  - (b) Bupropion SR should be used because it has been shown to be superior to varenicline and to have less risk associated with seizures.
  - (c) Any of the available agents would be appropriate, since this patient does not have conditions that would prohibit use.
  - (d) This patient should go "cold turkey" and follow-up with the physician in 6 months.