Chapter 13   Drugs for Treating Psychiatric Disorders

Case Study
As the athletic trainer for the basketball team, Nate travels over the Thanksgiving break with the team to the annual Las Vegas Men’s Invitational Basketball Tournament. It is a week-long event, and he notices rather quickly that the freshman center is being ignored by many of the other team members. Upon closer observation, Nate realizes why: the freshman seems to talk incessantly, even when the coach is talking. Nate notices that this player also interrupts other players when they are contributing to a conversation. He doesn’t seem to think before he speaks and frequently gets into trouble because of it. Nate thinks the freshman has attention deficit/hyperactivity disorder (ADHD) and approaches him about it. He admits that he has had a problem interacting with others for a long time and indicates that school is hard for him because he can’t seem to concentrate enough to learn the information. He tells Nate that when he was in elementary school, his mother took him to a doctor but the physician said, “Boys will be boys” and dismissed his problems in school to his high energy level. Nate tells the freshman that when they return home, he will refer him to a physician. Nate knows that if this player does have ADHD, he will likely be placed on medication, either a stimulant or a nonstimulant drug. Nate intends to identify the side effects of these drugs so he is prepared if the freshman complains of any of them. What adverse effects should the athlete expect from these medications? How do the stimulant medications differ from the nonstimulant medications?

Answer: The adverse effects of the stimulant and nonstimulant medications vary based on the age of the patient being treated. For example, in children, growth suppression is a potential concern. In adults with cardiovascular disease, cardiovascular complications, such as dysrhythmias, from the stimulant medications could be of concern. Because of the central nervous system stimulation that occurs with medications such as amphetamine and methylphenidate, the athlete could experience insomnia. There are also possible psychiatric adverse effects and mood disturbances with the stimulant medications; this could include anxiety, irritability, mania, violent or aggressive behavior, and psychosis. Euphoria occurs with these medications, so there is a potential for abuse. The nonstimulant medications do not cause euphoria and do not have an abuse potential. This is a major difference in the adverse effect profile of the ADHD medications. Atomoxetine can also cause weight loss and growth suppression, although to a lesser extent than stimulants. Liver damage and an increased suicide risk are serious adverse effects of atomoxetine. Guanfacine and clonidine can cause low blood pressure. Fatigue is also common with these agents.

Exam Questions
1. The atypical antipsychotics are preferred over the typical antipsychotics because they have a lower incidence of:
   a. Weight gain.
   b. Extrapyramidal effects.
   c. Agranulocytosis.
   d. Hyperglycemia.

2. Venlafaxine (Effexor) blocks the reuptake of:
   a. Serotonin.
   b. Serotonin and dopamine.
   c. Serotonin and norepinephrine.
   d. Serotonin and gamma-aminobutyric acid (GABA).
3. The maximal antidepressant response with the selective serotonin reuptake inhibitors (SSRIs) is typically achieved in:
   a. 1 to 3 days.
   b. 7 to 10 days.
   c. 1 to 3 weeks.
   d. 4 to 6 weeks.

4. The benzodiazepine-like drug that has the fastest onset of action but the shortest duration of action is:
   a. Eszopiclone (Lunesta).
   b. Zaleplon (Sonata).
   c. Triazolam (Halcion).
   d. Zolpidem (Ambien).

5. Which of the following medications is a stimulant used in the treatment of ADHD?
   a. Methylphenidate (Ritalin).
   b. Clonidine (Kapvay).
   c. Bupropion (Wellbutrin).
   d. Atomoxetine (Strattera).

6. An advantage of using buspirone in treatment of generalized anxiety disorder compared with benzodiazepines is that buspirone:
   a. Has a faster onset of action.
   b. Is not metabolized by P450 and therefore has fewer drug interactions.
   c. Does not have abuse potential and is not a controlled substance.
   d. Also helps with smoking cessation.

7. Lithium is a mood stabilizer used in the treatment of bipolar disorder; however, use of this medication requires careful monitoring because it:
   a. Induces the metabolism of other drugs, including its own metabolism.
   b. Has a low therapeutic index.
   c. Can convert a patient in the depression phase into the manic phase.
   d. Causes a high rate of agranulocytosis.

8. Monoamine oxidase inhibitors (MAOIs) are not preferred antidepressants because they cause _____ if taken with foods containing tyramine.
   a. QT interval prolongation.
   b. Seizures.
   c. Tardive dyskinesia.
   d. Hypertensive crisis.

9. Which of the following medications is an SSRI?
   a. Sertraline (Zoloft).
   b. Bupropion (Wellbutrin).
   c. Duloxetine (Cymbalta).
   d. Tranylcypromine (Parnate).
10. The preferred medications for the treatment of posttraumatic stress disorder (PTSD) are:
   a. MAOIs.
   b. Atypical antipsychotics.
   c. SSRIs.
   d. Benzodiazepines.