CONTINUING EDUCATION TEST: Current Methods of Pharmacologic Stress Testing and the Potential Advantages of New Agents

1. Which of the following pharmacologic stress agents indirectly causes an increase in coronary flow?
   A. Adenosine.
   B. Regadenoson.
   C. Dobutamine.
   D. Dipyridamole.

2. Which stress method in conjunction with myocardial perfusion imaging (MPI) is the best clinical method to evaluate coronary flow reserve?
   A. Exercise.
   B. Vasodilator agents.
   C. Dobutamine.
   D. They are all equal.

3. Approximately, what percentage of MPI studies is performed with vasodilator pharmacologic stress?
   A. 25%.
   B. 35%.
   C. 50%.
   D. 90%.

4. Why does aminophylline reverse or stop the side effects caused by dipyridamole?
   A. Aminophylline binds to adenosine.
   B. Aminophylline binds to A₂a receptors.
   C. Aminophylline causes degradation of adenosine.
   D. Aminophylline causes degradation of dipyridamole.

5. Which of the following statements about MPI for patients who are undergoing β-blocker therapy is correct?
   A. β-blockers do not affect the A₂a adenosine agonists.
   B. These patients should get an exercise stress test rather than a pharmacologic stress test if possible.
   C. These patients should be given dipyridamole orally.
   D. None of the above.

6. To what does “CFR” refer?
   A. Coronary flow reverse.
   B. Congestive heart failure.
   C. Coronary steal.
   D. Coronary flow reserve.

7. Which of the following statements about dobutamine stress is correct?
A. Dobutamine stress echocardiography is more sensitive for diagnosing coronary artery disease than dobutamine stress MPI.
B. A more appropriate dobutamine protocol would increase the duration of each dosing stage to 10 min.
C. The ability of dobutamine to augment coronary flow is greater than that which can be achieved with adenosine.
D. All of the above.

8. What is the major difference among the following 3 adenosine receptors: A1, A2a, and A2b?
A. They differ in their location and effect.
B. They all cause vasodilation of varying degrees.
C. Some cause hypertension.
D. There are no differences in terms of effect on coronary blood flow.

9. What is the major reason that A2a-specific receptor agonists for pharmacologic stress have been developed?
A. To replace dobutamine as a stress agent.
B. To replace exercise as the major type of stress for MPI.
C. To reduce the negative side effects that are associated with vasodilator agents.
D. To yield a greater percentage of patients reaching the 85% maximum predicted heart rate during stress testing.

10. How many A2a receptor agonists have been Food and Drug Administration–approved for pharmacologic stress?
A. 1.
B. 2.
C. 4.
D. 6.

11. Which of the following statements about regadenoson is correct?
A. The dose is based on body weight.
B. The dose is administered as a bolus injection followed by a saline flush.
C. The vasodilating effect begins to occur at 10–15 min after injection.
D. The effects last 7–10 min.

12. Which of the following statements about the side effects caused by regadenoson are correct?
A. Regadenoson causes side effects similar to adenosine but with less frequency and intensity.
B. Patients experience no side effects.
C. At this time, regadenoson can and should be used—with much less concern than for other vasodilator agents—for patients who have a history of bronchospasm.
D. None of the above.