

CONTINUING EDUCATION TEST

Pharmacologic Cardiac Intervention: Comparison of Adenosine, Dipyridamole, and Dobutamine

For each of the following questions, select the best answer. Then circle the number on the CE Tests Answer Sheet that corresponds to the answer you have selected. Keep a record of your responses so that you can compare them with the correct answers, which will be published in the next issue of the Journal. Answers to these test questions should be returned on the Answer Sheet no later than September 1, 1992. Supply your name, address, and VOICE number in the spaces provided on the Answer Sheet. Your VOICE number appears on the upper left hand corner of your Journal mailing label. No credit can be recorded without it. A 70% correct response rate is required to receive 0.1 CEU credit for this article. Members participating in the continuing education activity will receive documentation on their VOICE transcript, which is issued in March of each year. Nonmembers may request verification of their participation but do not receive transcripts.

A. Adenosine, dipyridamole, and dobutamine are vasodilators.

- 101. True
- 102. False

B. High coronary circulatory resistance with a low coronary output and high oxygen extraction of the myocardium occurs during _____.

- 103. a normal resting state
- 104. an abnormal resting state
- 105. a normal stress state
- 106. an abnormal stress state

C. Adenosine administration results in coronary vasodilation through _____.

- 107. increasing the endogenous adenosine levels
- 108. increasing the endogenous norepinephrine stores
- 109. blocking the receptor sites
- 110. smooth muscle relaxation, which increases the blood flow

D. The clearance pathway of adenosine across the cell membrane is inhibited by _____.

- 111. adenosine
- 112. dipyridamole
- 113. dobutamine
- 114. 111 & 112

E. The half-life of adenosine is _____ sec.

- 115. <5
- 116. <10
- 117. <15
- 118. <20

F. The half-life of dipyridamole is _____.

- 119. 15–20 sec
- 120. 30–60 sec
- 121. 5–15 min
- 122. 15–30 min

G. The pharmacologic agent which increases contraction and oxygen supply by stimulating the beta-1 receptors is _____.

- 123. adenosine
- 124. dipyridamole
- 125. dobutamine

H. The half-life of dobutamine is _____ min.

- 126. 1
- 127. 2
- 128. 5
- 129. 10

I. Dobutamine dramatically increases the heart rate when a dose of 15 $\mu\text{g}/\text{kg}/\text{min}$ is utilized.

- 130. True
- 131. False

J. The type(s) of adverse event(s) reported in over 30% of patients during IV adenosine use was (were) _____.

- 132. dyspnea
- 133. headache
- 134. chest pain
- 135. dizziness
- 136. flushing
- 137. 132, 134, & 136
- 138. 132, 133, & 135

K. The type(s) of adverse event(s) reported in over 10% of the patients during IV dipyridamole use was (were) _____.

- 139. dyspnea
- 140. headache
- 141. chest pain
- 142. dizziness
- 143. flushing
- 144. 140, 141, & 142
- 145. 139, 140, & 143

L. To reverse any adverse cardiac effects when using adenosine or dipyridamole, the physician or qualified person may need to administer _____.

- 146. osmolol
- 147. benedryl
- 148. theophylline
- 149. aminophylline

M. Injection of the cardiac imaging agent occurs _____ min after IV adenosine infusion has begun.

- 150. 2
- 151. 3
- 152. 4
- 153. 5

N. Side effects of dobutamine include _____.

- 154. nausea
- 155. chest pain
- 156. headache
- 157. tachycardia
- 158. 155, 156, & 157
- 159. all of the above

O. Contraindications for use of dobutamine include _____.

- 160. asthma
- 161. beta blockers
- 162. theophylline
- 163. bronchospastic disease
- 164. 161 & 162
- 165. all of the above

P. Theophylline is used to counteract the side effects of dobutamine.

- 166. True
- 167. False

Q. Fasting before pharmacologic stress testing should be for a minimum of _____ hours.

- 168. 3
- 169. 6
- 170. 9
- 171. 12

R. Monitoring of patients having an IV dipyridamole stress test should be done for _____ min post-infusion.

- 172. 5
- 173. 10
- 174. 15
- 175. 20

Answers to CE Article Test, March 1992

The Continuing Education article "Hepatobiliary Imaging Update" by Maggie Chester and Jerry Glowniak was accompanied by a CE article test. The correct answers are as follows.

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|--------|--------|--------|--------|--------|--------|
| A. 102 | C. 109 | E. 119 | G. 128 | I. 133 | K. 139 |
| B. 106 | D. 113 | F. 122 | H. 129 | J. 138 | L. 143 |