

Additional Reading

Berman DS, Amsterdam EA, Hines HH, et al. New approach to interpretation of technetium-99m pyrophosphate scintigraphy in detection of acute myocardial infarction. *Am J Cardiol* 1977;39:341-46.

Bonte FJ, Parkey RW, Graham KD, et al. A new method for radionuclide imaging of myocardial infarcts. *Radiology* 1974;110:473.

Botvinick EH, Shames DM. *Nuclear cardiology: Clinical applications.*

Baltimore, Williams & Wilkins, 1980, p 100.

Holman BL, Lesch M, Zweiman FG, et al. Detection and sizing of acute myocardial infarcts with Tc-99m (Sn) tetracycline. *N Engl J Med* 1974;291:159.

Kramer RJ, Goldstein RE, Hirshfeld JW, et al. Accumulation of gallium-67 in regions of acute myocardial infarction. *Am J Cardiol* 1974;33:861-67.

Prasquier R, Taradash MR, Botvinick EH, et al. The specificity of the diffuse pattern of cardiac uptake in myocardial infarction imaging with technetium-99m stannous pyrophosphate. *Circulation* 1977;55:61.

CE ARTICLE TEST

For each of the following eleven questions select the best answer. Then circle the number on the reader service card 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.

A. Which of the following imaging agents does not localize within regions of acutely infarcted myocardium?

- 151. Tc-99m glucoheptonate.
- 152. Tl-201 chloride.
- 153. Ga-67 citrate.
- 154. Tc-99m tetracycline.

B. Optimum imaging time following the acute event of maximal uptake in the infarcted myocardium with Tc-99m pyrophosphate is _____.

- 155. 0-12 hr.
- 156. 12-24 hr.
- 157. 24-72 hr.
- 158. 72-120 hr.

C. The abnormal scan should revert to normal within _____.

- 159. 24 hr.
- 160. 2-4 days.
- 161. 7-10 days.
- 162. 14-21 days.

D. Technetium-99m pyrophosphate imaging has been useful in which of the following conditions?

- 163. previous infarction in the same general location.
- 164. left bundle branch block.
- 165. recent cardiac surgery.
- 166. all of the above.

E. Which of the following techniques is able to distinguish acute from chronic infarction?

- 167. thallium-201 perfusion imaging.
- 168. radionuclide ventriculography.
- 169. Tc-99m-pyrophosphate imaging.
- 170. echocardiography.

F. Diffuse uptake of Tc-99m pyrophosphate may be the result of _____.

- 171. digoxin therapy.
- 172. cardioversion.
- 173. a recent chest x-ray.
- 174. the presence of a pacemaker.

G. A disadvantage of Tc-99m-pyrophosphate scanning is:

- 175. myocardial uptake of pyrophosphate in patients after infarction or with angina has been noted to revert to normal after coronary artery bypass surgery.
- 176. abnormal pyrophosphate uptake occurs in 2% of patients undergoing bone imaging.
- 177. the exact mechanism of tracer uptake is still being studied.
- 178. the delay required from the onset of symptoms to the time of imaging.

H. *False-positive scans may be due to*

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- 179. left ventricular thrombus.
 - 180. pulmonary embolus.
 - 181. persistent blood pool activity.
 - 182. left-to-right shunt.
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I. *Technetium-99m-pyrophosphate myocardial images should be collected for at least ____ counts.*

- 183. 200 K.
- 184. 400 K.
- 185. 600 K.
- 186. 800 K.

J. *Occasionally, activity in which of the following structures may be falsely interpreted as myocardial uptake?*

- 187. stomach.
 - 188. breast.
 - 189. bone or cartilage.
 - 190. all of the above.
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K. *Persistence of abnormal myocardial uptake of Tc-99m-pyrophosphate beyond a week after the acute event may indicate _____.*

- 191. a poor prognosis.
- 192. a chronic infection.
- 193. a false-positive test.
- 194. digoxin toxicity.

Your answers to the above questions should be returned on a reader service card (found in the back of the Journal) no later than September 1, 1984. Remember to supply your name and address in the space provided on the card; also write your VOICE number following your name. Your VOICE number appears on the upper left hand corner of your Journal mailing label. No credit can be recorded without it.