

**Hegewald MG, RT Palac, D Angello, NS Perlmutter, RA Wilson. Ribose infusion accelerates thallium redistribution with early imaging compared with late 24-hour imaging without ribose. *J Am Coll Cardiol* 1991;18:1671-1681.**

To determine if early (4-h) thallium-201 imaging with ribose infusion would enhance detection of thallium redistribution better than late (24-h) imaging without ribose infusion, 15 patients with coronary artery disease underwent thallium stress tests by both methods within 2 weeks. All 15 patients had quantitative coronary angiography. After immediate postexercise planar imaging during the first of two exercise tests, patients were randomized to receive either intravenous ribose (3.3 mg/kg per min) or a control infusion of saline solution for 30 min. Images performed at 4 h for the ribose study were compared with those at 24 h for the saline control study. During the second test, exercise was carried to the same rate-pressure product and each patient received the opposite infusion. Four-hour postexercise images after ribose infusion identified 21 reversible defects not seen in the 24-h saline study. Three reversible defects were seen only in saline studies, but not with ribose at 4 h ( $p$  less than 0.01); 15 reversible defects were seen with both tests. When analyzed with respect to the 31 vascular territories supplied by a coronary artery with a greater than 50% stenosis, 8 territories had reversible defects present in the ribose but not the saline study and the saline study did not demonstrate reversible defects in territories that were seen in the ribose study ( $p$  less than 0.01). In 14 of these territories, reversible defects were seen with both tests. In 6 of 15 patients, additional vascular territories with reversible defects were identified after ribose infusion. It is concluded that ribose enhances the detection of thallium redistribution at 4 h compared with 24-h control images in patients with coronary artery disease and, therefore, substantially improves the identification of viable ischemic myocardium.