Myocardial Ischemia on Thallium Scintigraphy in Hypertrophic Cardiomyopathy
Predictor of Sudden Cardiac Death

John H. Haley, MD; Todd D. Miller, MD

An 18-year-old man with known hypertrophic obstructive cardiomyopathy since age 9 was referred for evaluation. His mother had died suddenly at age 24, and her autopsy demonstrated hypertrophic obstructive cardiomyopathy. The patient was asymptomatic. His only medication was propranolol. Two-dimensional echocardiographic images demonstrated normal left ventricular size with hyperdynamic function (ejection fraction 80%) with a septal thickness of 30 mm (Figure, a). The Doppler-derived maximal instantaneous gradient was 21 mm Hg.

An exercise thallium study demonstrated markedly increased thickness of the ventricular septum and part of the anterior wall, with a large area of anterior wall and septal ischemia primarily involving the subendocardium (Figure, b). Inducible ischemia on thallium scintigraphy identifies a subgroup of young, asymptomatic patients with hypertrophic obstructive cardiomyopathy who are at increased risk of sudden cardiac death. In these patients, more aggressive therapy, including placement of an automatic implantable cardioverter defibrillator, may be warranted.

Echocardiographic apical 4-chamber (A) and short-axis (B) views of the left ventricle (LV) demonstrating normal left ventricular size with marked septal hypertrophy. RV indicates right ventricle; RA, right atrium; LA, left atrium; S, septum; and L, lateral wall. C, Thallium scintigraphy showing stress and redistribution images in the horizontal long-axis (HLA) and short-axis (SA) views. Increased thallium uptake in the septum (arrow) is present on the redistribution (Redist) images in both views and in the anterior wall on the short-axis images.
Myocardial Ischemia on Thallium Scintigraphy in Hypertrophic Cardiomyopathy: Predictor of Sudden Cardiac Death
John H. Haley and Todd D. Miller

Circulation. 2001;104:e71
doi: 10.1161/hc3801.096179

Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2001 American Heart Association, Inc. All rights reserved.
Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circ.ahajournals.org/content/104/13/e71

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in Circulation can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to Circulation is online at:
http://circ.ahajournals.org//subscriptions/