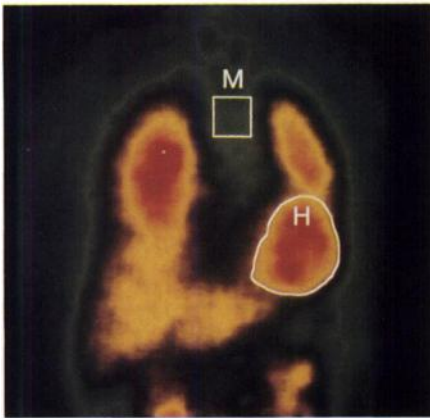


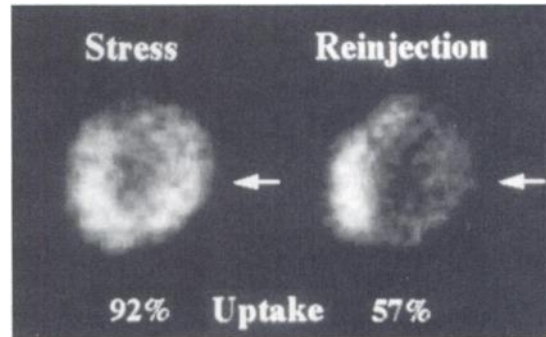
The Whole Is Greater Than the Sum of Its Parts



Regions of interest on planar imaging with [¹²³I]MIBG were set as the mediastinum (M) and heart (H). Cardiac MIBG uptake was quantified in terms of the H/M ratio. See pages 712–717.

The continued growth and diversity of nuclear medicine procedures for the evaluation of cardiovascular disorders is once again demonstrated in this issue. Although not entirely dedicated to cardiovascular nuclear medicine, a major portion of the issue reports recent clinical and laboratory developments in this area.

Most of these articles address aspects of myocardial perfusion imaging. In all, seven different radioactive tracers are utilized to further assess this phenomenon, even though it has been over 20 years since ²⁰¹Tl scintigraphy was introduced for this purpose. Thallium-201, of course, continues to be the mainstay of clinical nuclear assessment of coronary artery disease but even this “mature” radiotracer technique continues to reveal fresh insights into the physiology of perfusion and the pathophysiology of ischemic heart disease. The utility of thallium and dipyridamole, thallium and dobutamine and thallium reinjection are each examined. Other approaches to assessing normal and abnormal perfusion involve the use of [¹²³I]MIBG (to assess sympathetic innervation), [¹²³I]BMIPP (a tracer of fatty acid metabolism) and alternate perfusion



Scintigraphic criteria used for patient selection. A normal qualitative segmental uptake of ²⁰¹Tl at stress imaging resulting in a clear-cut defect following reinjection and associated to a reduction in percent uptake of at least 15% of the peak was considered as ²⁰¹Tl reverse redistribution. Opposite criteria were used for the identification of reversible defects while no significant changes from stress to reinjection identified normal and fixed defects, respectively. See pages 735–741

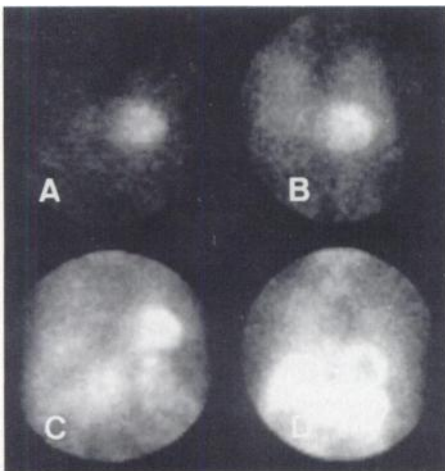
tracers, including the PET tracers ⁶²Cu-PTSM and ¹³N-ammonia, as well as the relatively new ^{99m}Tc tracer Q-12, and ^{99m}Tc-nitroimidazole. These reports are supplemented by several reports of improved instrumentation and processing of scintigraphic information obtained using these tracers.

Interestingly, two articles report on ^{99m}Tc-labeled tracers to identify vascular thrombi. These techniques may reopen an important area of diagnosis and patient management.

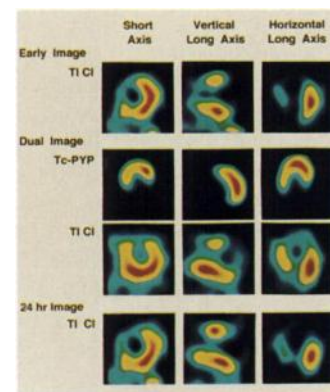
Although *JNM* identifies this cluster of research and clinical reports as “nuclear cardiology,” all of this activity evolves from vigorous nuclear medicine programs and, in turn, intellectually enriches the science and practice of all of nuclear medicine. These developments provide additional arguments in support of an integrated nuclear medicine service which provides scintigraphic examinations for patients, all of the patient, and does not draw a line around an organ and define itself as an organ-specific nuclear laboratory.

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Exercise subjects with normal L/M of 0.25 (A) and elevated L/M of 0.39 (B). Dipyridamole subjects with normal L/M of 0.40 (C) and with CAD and elevated L/M of 0.55 (D). See pages 723–729.



Representative case of simultaneous ²⁰¹Tl/^{99m}Tc dual-isotope imaging. Patient had anteroseptal and apical transmural myocardial infarction. Septal portion of the left ventricle appears to be filled-in in dual ²⁰¹Tl imaging compared to early or 24-hr imaging. See pages 781–784.