Evaluation of the Incremental Diagnostic Value and Impact on Patient Treatment of Thallium Scintigraphy

The incremental diagnostic yield of exercise $^{201}$TI scintigraphy with visual and quantitative analysis was determined in 191 patients with known or suspected coronary artery disease. Page 1727


Iodine-131-Metaiodobenzylguanidine and Bone Scintigraphy for the Detection of Neuroblastoma

Eighty-five patients with known or suspected neuroblastoma were evaluated for evidence of skeletal or extraskeletal disease by $^{99m}$Tc-MDP bone and $^{131I}$-MBG scans performed within 1 mo of each other. Page 1735

Quantitative Measurement of Regional Cerebral Blood Flow Using N-Isopropyl-(Iodine-123)p-Iodophenylpentane and Single-Photon Emission Computed Tomography

Regional cerebral uptake data calculated from serial $^{123}$IIMP SPECT in 25 patients were used to establish functional maps of regional cerebral blood flow values. Page 1741

Radioimmunodetection of Occult Carcinoembryonic Antigen

One hundred forty patients suspected of having occult cancer were evaluated with $^{111}$In-labeled anti-CEA monoclonal antibody ZCE-025. Except for elevated CEA levels, all had negative work-ups, including negative or inconclusive CT scans. Radiocolloid imaging detected recurrent tumor in 75 of the 95 patients with metastatic disease. Page 1750

Editorial: Immunoscintigraphy of Colorectal Carcinoma and the Loch Ness Monster Page 1756

Regional Cerebral Perfusion in

Landau-Kleffner Syndrome and Related Childhood Language Disorders

$^{99m}$Tc-MIBG SPECT studies of five children with Landau-Kleffner syndrome (LKS), and three with syndromes of verbal-auditory agnosia were obtained in the belief that cerebral perfusion may elucidate the pathogenesis of LKS. Page 1758

Colon Carcinoma Immuno-scintigraphy by Monoclonal Anti-CEA Antibody Labeled with Gallium-67-Aminoxyacetylatedeferoxamine

Gallium and $^{125}$I-labeled anti-CEA antibodies were injected preoperatively into 14 patients for colorectal carcinoma imaging. Surgical specimens were analyzed for the concentration of each antibody. Page 1766

Local and Systemic Effects of Radiation on Bone Metabolism Measured by Quantitative SPECT

Quantitative bone scintigraphy, undertaken in patients before and after radiation treatment, was compared to 22 normal controls who had been measured twice over several months. Page 1774

Editorial: Does Radiotherapy Affect Regional Bone Formation? Page 1780

Planar Myocardial Perfusion Imaging with Technetium-99m-Teboroxime: Comparison by Vascular Territory with Thallium-201 and Coronary Angiography

Sixty-seven patients underwent planar teboroxime imaging with a rapid acquisition protocol to evaluate the utility of this compound, in comparison with $^{201}$TI, for the detection of coronary artery disease. Page 1783

Brain SPECT and the Effect of Cerebral Angioplasty in Delayed Ischemia due to Vasospasm

Brain SPECT with HMPAO was obtained before and after cerebral angioplasty in ten patients with delayed ischemia due to vasospasm. Page 1789

Functional Imaging of Peripheral Vascular Disease: A Comparison Between Exercise Whole-Body Thallium Perfusion Imaging and Contrast Arteriography

Whole-body thallium scintigraphy was used to study leg muscle perfusion in 31 patients with peripheral vascular disease and 12 controls. Scans were performed immediately following exercise and then 4 hr later. Page 1797

Detection and Localization of Parathyroid Adenomas in Patients with Hyperparathyroidism Using a Single Radionuclide Imaging Procedure with Technetium-99m-Sestamibi (Double-Phase Study)

Twenty-three patients with a clinical and biological diagnosis of hyperparathyroidism were submitted for a MIBI study prior to surgical exploration of the neck. Cervico-thoracic planar imaging was performed at 15 min, and again 2–3 hr after intravenous injection of 20–25 mCi of $^{99m}$Tc-sestamibi. Page 1801

Editorial: Parathyroid Imaging-Current Status and Future Prospects Page 1807

Localization of Infection Using Streptavadin and Biotin: An Alternative to Nonspecific Polyclonal IgG

Indium-111-labeled streptavadin and labeled polyclonal nonspecific IgG showed equivalent localization to infection in studies of a mouse model with an Escherichia coli infection in one thigh. Page 1810

Comparison of Regional Blood-Brain Transport Kinetics Between Glucose and Fluorodeoxyglucose

High-resolution quantitative dual-tracer digital autoradiography was used to directly compare blood-to-brain transport rate constants of radiolabeled glucose and FDG in normal and pharmacologically stimulated rats. .................................................. Page 189

A Quantitative Autoradiographic Study of the Heterogeneous Activity Distribution of Different Indium-111-Labeled Radiopharmaceuticals in Rat Tissues

Quantification was performed utilizing an imaging system designed for whole-body autoradiographs. .................................................. Page 1825

Editorial: Quantitative Autoradiography for the Study of Radiopharmaceutical Uptake and Dose Heterogeneity ........ Page 1833

Techentium-99m-N1-(2-Mercaptotriethylamine)-N2-(2-Propropargylthio-1-Methylpropyl)-1,2-Benzenediamine (T691): Preclinical Studies of a Potential New Tracer for Regional Cerebral Perfusion

The chemical stability, cerebral extraction and retention for and biodistribution of [99mTc]T691 in rodents and nonhuman primates is described .................. Page 1836

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Major Upward Creep of the Heart During Exercise Thallium-201

Myocardial SPECT in a Patient with Chronic Obstructive Pulmonary Disease

Severe pulmonary disease caused marked upward creep resulting in reconstruction of grossly abnormal tomograms ................... Page 1846

Pelvic Radiiodine Uptake in a Rectal Wall Teratoma After Thyroidectomy for Papillary Carcinoma

A 30-yr-old woman with previously resected papillary thyroid carcinoma was found to have a pelvic lesion which concentrated radiiodine. . Page 1848

Gallium-67-Citrate Scanning in Patients with Sarcoid Uveitis

Two cases of ophthalmic sarcoidosis that demonstrate uveal accumulation of 67Ga-citrate are presented ........ Page 1851

Scintigraphy of Torsion in Triorchidism

Routine scrotal scintigraphy revealed late torsion, and a sitting view demonstrated triorchidism ........ Page 1854

Thallium-201 Accumulation by Epidermoid Inclusion Cyst

An elderly male undergoing re-evaluation for coronary artery disease demonstrated an extra-cardiac focus of 201Th accumulation on a planar myocardial perfusion scan. . Page 1857

Sensitivity, Resolution and Image Quality with a Multi-Head SPECT Camera

The optimum collimation factors required for superior image quality with a three-headed SPECT camera were investigated ........ Page 1859

Fatty Acid Kinetics in Aerobic Myocardium: Characteristics of Tracer Carbon Entry and Washout and Influence of Metabolic Demand

Step-function labeling with 14C-palmitate was performed in 20 extracorporeally perfused, intact working pig hearts. Coronary venous effluent was monitored for efflux of products throughout 40-60 min of aerobic perfusion ........ Page 1864

Correction for Attenuation of Techentium-99m-HMPAO SPECT Brain Imaging

Effective bone and tissue attenuation coefficients are utilized to create a correction technique to compensate for attenuation in 99mTc-HMPAO brain SPECT images ........ Page 1875

Description of a Prototype Emission-Transmission CT Imaging System

Simultaneous x-ray transmission CT and SPECT phantom studies are featured in a prototype imaging system employing a 23-element detector array coupled to a collimator with its septa angled toward the focal spot of an x-ray tube. .................. Page 1881

Continuing Education: Functional Brain SPECT: The Emergence of a Powerful Clinical Method .................................................. Page 1888

Clinicopathologic Conferences: Predictive Value of Dipyridamole Thallium Imaging in a Patient with Myocardial Bridging but Without Fixed Obstructive Coronary Artery Disease ........ Page 1905