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Prediction of Cerebral Palsy in High-Risk Neonates: A Technetium-99m-HMPAO SPECT Study

The value of Technetium-99m-HMPAO brain SPECT for predicting the type and severity of neurological handicaps in infants who have experienced prenatal or perinatal injury was evaluated in 88 high-risk neonates. page 1223

Scintigraphy Versus pH Probe for Quantification of Pediatric Gastroesophageal Reflux: A Study Using Concurrent Multiplexed Data and Acid Feedings

Twelve simultaneous scintigraphic and pH probe studies were performed in children being evaluated for reflux. A multiplexor synchronized scintigraphic and pH probe data exactly. ... page 1228

Assessing Collateral Cerebral Perfusion with Technetium-99m-HMPAO SPECT During Temporary Internal Carotid Artery Occlusion

Technetium-99m-HMPAO SPECT was evaluated in 20 patients during temporary carotid artery occlusion. Initial results suggest that symmetric cerebral perfusion during temporary occlusion indicates temporary occlusion will be tolerated. page 1235

Brain Blood Flow SPECT in Temporary Balloon Occlusion of Carotid and Intracerebral Arteries

To preoperatively determine tolerance for permanent occlusion of a cervical internal carotid or cerebral artery, the authors undertook a retrospective analysis of 42 patients with a variety of cerebrovascular and neoplastic lesions who underwent trial balloon occlusion at their institution. page 1239

Editorial: SPECT HMPAO and Balloon Test Occlusion: Interest in Predicting Tolerance Prior to Permanent Cerebral Artery Occlusion

..... page 1243

Radioimmunodetection of Hodgkins's Disease and Non-Hodgkin's Lymphomas with Mono-

clonal Antibody to Eosinophil Peroxidase

Ten patients with Hodgkin's disease and eosinophilia, three with non-Hodgkin's lymphomas and eosinophilia and five control patients were injected with ¹¹¹In-labeled EOS antibody. At 24, 48 and 72 hr postinjection, gamma camera images were obtained along with blood and urine samples. page 1246

Biokinetics of Technetium-99m-Tetrofosmin: A Myocardial Perfusion Imaging Agent: Implications for a One-Day Imaging Protocol

Twenty patients with suspected coronary artery disease undergoing symptom-limited treadmill exercise were injected with ^{99m}Tc-tetrofosmin at peak exercise and four hours later at rest and imaged with gamma cameras equipped with a low-energy all purpose collimator. page 1254

Phase II Scintigraphic Clinical Trial of Malignant Melanoma and Metastases with Iodine-123-N-(2-Diethylaminoethyl 4-Iodobenzamide)

One hundred and ten patients with a history of melanoma were evaluated by ¹²⁵I-BZA in two nuclear medicine departments. On a lesion-site basis, diagnostic sensitivity was 81%, accuracy 87% and specificity 100%. page 1260

Radioimmunodetection of Medullary Thyroid Cancer Using a Bispecific Anti-CEA/Anti-Indium-DTPA Antibody and an Indium-111-DTPA Dimer

In eight patients with medullary thyroid cancer, two-step radioimmunotargeting using a bispecific anti-CEA/anti-DTPA antibody and an indium-labeled DTPA Dimer was evaluated. page 1267

Iodine-123-IBZM Dopamine D2 Receptor and Technetium-99m-

HMPAO Brain Perfusion SPECT in the Evaluation of Patients with and Subjects at Risk for Huntington's Disease

Striatal D2 receptor binding and perfusion were measured semiquantitatively in four early symptomatic Huntington's Disease patients, 20 asymptomatic subjects at risk for Huntington's Disease and 22 controls to evaluate the clinical utility of IBZM D2 receptor and HMPAO brain perfusion SPECT imaging, respectively. page 1274

Metaiodobenzylguanidine: A Evaluation of Its Potential as a Tracer for Monitoring Doxorubicin Cardiomyopathy

Alterations in cardiac adrenergic neuron activity and progression of left ventricular dysfunction in comparison with severity of structural changes, were evaluated in a rat model of adramycin cardiomyopathy. page 1282

Myocardial Kinetics of Carbon-11-Meta-Hydroxyephedrine: Retention Mechanisms and Effects of Norepinephrine

Externally monitored time-activity curves demonstrated a strong uptake process occurring in isolated working rat hearts, with slow monoexponential clearance rates. page 1287

Pharmacokinetics of an Anti-Carcinoembryonic Antigen Monoclonal Antibody Conjugated to a Bifunctional Transition Metal Carborane Complex (Venus Flytrap Cluster) in Tumor-Bearing Mice

The radioimmune conjugate under study retained greater than 90% of its immunoreactivity, was stable in serum and demonstrated good localization in tumor xenografts. page 1294

Distribution of Deoxyglucose and Technetium-99m-Glucarate in the Acutely Ischemic Myocardium

The regional myocardial distribution of ^{99m}Tc-glucarate was compared to ³H-

DG in 22 rabbits with left circumflex marginal artery occlusion *page 1303*

Serial Course of Left Ventricular Function, Perfusion and Fatty Acid Uptake in the Cardiomyopathic Hamster

The effect of metabolic and perfusion changes on alterations in ventricular function in the course of cardiomyopathy was evaluated in Syrian hamsters genetically predisposed to congestive cardiomyopathy. Results were compared to normal, age-matched control animals *page 1309*

Evaluation of Indium-111-Polyclonal Immunoglobulin-G to Quantitate Atherosclerosis in Watanabe Heritable Hyperlipidemic Rabbits with Scintigraphy: Effect of Age and Treatment with Antioxidants or Ethinyllestradiol

To investigate ways of optimizing scintigraphic detection of atherosclerosis with ¹¹¹In-labeled polyclonal IgG noninvasive scintigraphic results in Watanabe rabbits were compared with ex vivo analyses of incorporated radioactivity as well as with histological staining *page 1316*

Editorial: Atherosclerosis Imaging: Pathophysiological Assessment for a New Era *page 1321*

Thallium-201 Scintigraphy for Assessment of a Gallium-67-Avid Mediastinal Mass Following Therapy for Hodgkin's Disease *page 1326*

Editorial: Benign Mediastinal and Parahilar Uptake of Gallium-67 in Treated Lymphoma: Do We Have All the Answers? *page 1330*

Modeling Approach to Eliminate the Need to Separate Arterial Plasma in

Oxygen-15-Oxygen Inhalation Positron Emission Tomography

Comparison of this method in eight inhalational studies performed on four subjects resulted in a good match between predicted H₂O¹⁵ curves and cerebral oxygen and blood flow rates and data obtained by frequent plasma separation *page 1333*

Detection of Patient Motion During Tomographic Myocardial Perfusion Imaging

Four separate methods were evaluated for their ability to detect the presence of motion, localize the camera angle at which motion occurred and measure the distance of the motion *page 1341*

Detection and Correction of Patient Motion in Dynamic and Static Myocardial SPECT using a Multi-Detector Camera

Using a low activity ^{99m}Tc point source, a method for the detection and correction of translational patient motion in dynamic and static myocardial SPECT studies, especially multi-detector cameras, was developed *page 1349*

Editorial: Effect of Motion on Cardiac SPECT Imaging *page 1355*

High-Speed Automated Discrete Blood Sampling for Positron Emission Tomography

The authors describe a discrete blood sampler that minimizes blood loss, maintains maximum temporal resolution and provides samples that can be processed prior to counting. . . *page 1357*

Absorbed Dose Calculations in Haversian Canals for Several Beta-Emitting Radionuclides

Absorbed dose factors for ⁹⁰Sr, ⁹⁰Y, ⁴⁵Ca, ⁸⁹Sr, ³²P, ¹³¹I and ¹⁵³Sm were calcu-

lated using a mathematical model of a Haversian canal *page 1361*

A Rotating PET Scanner Using BGO Block Detectors: Design, Performance and Applications

A prototype scanner based on the rotation of two opposing arrays of BGO block detectors is evaluated for clinical applications using both FDG and ⁸²Rb. *page 1367*

Clinicopathologic Conferences: Methotrexate-Induced Neurotoxicity: Appearance on Indium-111-White Blood Cells, Gallium-67-Citrate and Thallium-201-Chloride Scintigraphy

During remission from acute lymphoblastic leukemia, a 40-yr-old female was administered methotrexate as part of consolidation and, later, maintenance therapy. Responding to complaints of low-grade, occasionally spiking fever, Indium-labeled white blood cells and ⁶⁷Ga-citrate imaging revealed abnormal uptake in the right frontal section of the brain *page 1377*

MIRD Dose Estimate Report No. 17: Radiation Absorbed Dose Estimates from Inhaled Krypton-81m Gas in Lung Imaging

The data and the assumptions utilized for the calculations are included. *page 1382*

Position Statement: Clinical Use of Cardiac Positron Emission Tomography

This position paper of the Cardiovascular Council of the Society of Nuclear Medicine begins with the premise that PET represents the most advanced imaging modality in nuclear medicine today *page 1385*