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Parathyroid Imaging with Technetium-99m-Sestamibi: Preoperative Localization and Tissue Uptake Studies

Fifty-seven patients were scanned with both ^{99m}Tc-sestamibi and ²⁰¹Tl pre-operatively. Possible differences in the uptake of the two agents by thyroid and parathyroid tissue were evaluated by administering 10 MBq of each agent to patients undergoing surgical exploration and biopsy. Page 313

Technetium-99m-MIBI Uptake in Benign and Malignant Bone Lesions: A Comparative Study with Technetium-99m-MDP

A prospective comparison of MIBI versus MDP bone scans was conducted. MIBI clearly visualized a high percentage of the malignant lesions and its mean lesion/contralateral ratio was significantly higher than that of its benign counterparts. Page 319

Positron Emission Tomography Using Fluorine-18-Fluorodeoxyglucose in Malignant Lymphoma: A Comparison with Proliferative Activity

FDG PET was performed in 23 patients with malignant lymphoma and indices obtained from these studies were compared to pathologic findings. Page 325

Editorial: Clinical Applications of Positron Emission Tomography in Cancer: The Good, The Bad, and The Ugly. Page 330

Evaluation of Liver Tumors Using Fluorine-18-Fluorodeoxyglucose PET: Characterization of Tumor and Assessment of Effect of Treatment

To evaluate glucose metabolism in liver tumor, PET FDG studies were performed in 35 patients with proven liver tumors. Page 333

Editorial: Quantitating Tumor Glucose Metabolism with FDG and PET. Page 339

Validation of Gallium-67-Citrate Single-Photon Emission Computed

Tomography in Biopsy-Confirmed Residual Hodgkin's Disease in the Mediastinum

In a retrospective study of consecutive adult patients during restaging of Hodgkin's disease after therapy, CT and biopsy results were correlated with ⁶⁷Ga SPECT in order to determine the value of SPECT imaging for monitoring recurrent mediastinal Hodgkin's disease. Page 345

Bone Scintigraphy in Preschool Children with Lower Extremity Pain of Unknown Origin

The spectrum of bone scan findings in children under 5 yr of age with lower extremity pain and/or gait abnormalities was investigated in 56 children. Page 351

Effects of Dipyrindamole Infusion on Human Renal Function Observed Using Technetium-99m-DTPA

Renal filtration was assessed in five normal males using a bolus injection of 10 mCi of labeled DTPA 20 min following the injection of either dipyrindamole or saline. Page 355

The Frequency of Asymptomatic and Electrically Silent Exercise-Induced Regional Myocardial Ischemia During First-Pass Radionuclide Angiography with Upright Bicycle Ergometry

Rest and stress radionuclide studies of 104 patients indicate that electrically and symptomatically silent myocardial ischemia are frequent occurrences with upright bicycle ergometry. Page 359

Diagnostic Value of Technetium-99m Radionuclide Angiography for Detecting Thrombosis in Left Atrial Appendage

The diagnostic accuracy of radionuclide angiography to detect LA thrombi was evaluated in 60 patients with mitral valve disease who had undergone surgery. Page 365

Radiation-Induced Inhibition of Tumor Growth as Monitored by PET Using L-[1-¹¹C] Tyrosine and Fluorine-18-Fluorodeoxyglucose

Single x-ray doses of 10, 30 or 50 Gy were applied to rhabdomyosarcoma tumors growing in the flanks of rats. Dose-dependent reductions of tracer uptake were registered by PET 4 and 12 days after treatment. Page 373

Dosimetry at the Cellular Level of Kupffer Cells After Technetium-99m-Sulphur Colloid Injection

Dose to Kupffer cells was estimated at the cellular level after intravenous injection of ^{99m}Tc-labeled sulphur colloid in rats. The results were then compared with those obtained using macroscopic dosimetry. Page 380

Editorial: Does Nonuniformity of Dose Have Implications for Radiation Protection? Page 384

Biodistribution and Kinetics of Radiolabeled Proteins in Rats with Focal Infection

To evaluate the role of both protein and radionuclide in the accumulation of labeled IgG in infectious foci, calf muscle infection biodistribution in rats was determined 2, 6, 24, and 48 hr after injection of either an iodine-, indium-, or technetium-labeled radio-pharmaceutical. Page 388

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Polymeric Microspheres for Radionuclide Synovectomy Containing Neutron-Activated Holmium-166

PLA spheres containing sufficient masses of neutron-activatable ¹⁶⁵Ho were prepared under non-hazardous conditions and irradiated at a later time to produce therapeutic amounts of ¹⁶⁶Ho. In rabbit studies, the irradiated particles showed excellent ability to retain the encapsulated ¹⁶⁶Ho. Page 398

Experimental Study on Radioactive

Pathways of Hypodermically Injected Technetium-99m

The migration of ^{99m}Tc hypodermically injected into points of low electrical resistance was determined in 11 anesthetized dogs..... Page 403

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Membrane Trapping of Carbon-11-Labeled 1,2-Diacylglycerols as a Basic Concept for Assessing Phosphatidylinositol Turnover in the Neurotransmission Process

The uptake mechanism of 1,2-[¹¹C]diacylglycerols was studied and their use in a probe for the measurement of phosphatidylinositol turnover was verified..... Page 413

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Full-body biodistribution in rats was determined and expected human dosimetry was calculated for a central muscarinic receptor imaging agent..... Page 423

Identification and Differentiation of Congenital Gallbladder Abnormality by Quantitative Technetium-99m IDA Cholescintigraphy

The measurement of the CCK-8 induced gallbladder ejection fraction for each lobe assisted the authors in diagnosing a case of bilobed gallbladder presenting as a Valentine heart in an unusual location in the liver..... Page 431

Radiographic and Neuro-SPECT Imaging in an Immature Third Ventricle Teratoma: Case Report

An immature teratoma of the third ventricle was preoperatively thought to be a choroid plexus papilloma. Diagnosis was made by biopsy since radiographic, angiographic, and scintigraphic findings were nonspecific..... Page 435

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Left ventricular function during and following supine ergometer exercise was monitored in 54 patients before and after coronary artery bypass surgery..... Page 441

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A technique for the simultaneous three-dimensional presentation of amplitude and phase of the first Fourier harmonics from gated SPECT is described..... Page 458