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Fast Diagnosis of Abdominal Infections and Inflammations with Technetium-99m-HMPAO Labeled Leukocytes

The diagnostic value of early ^{99m}Tc-HMPAO leukocyte images was studied in 80 patients suspected of abdominal infection or inflammation. Page 2029

Editorial: Imaging of Inflammatory Sites in the 1990s: New Horizons Page 2034

Noninvasive Delineation of the Effects of Aging on Myocardial Perfusion

To gain greater understanding of the effects of age on myocardial perfusion, 11 young adults (25±4 yr) and 15 older adults (55±9 yr) without history or symptoms of cardiovascular disease were studied using H₂¹⁵O and PET under resting conditions and following administration of intravenous dipyridamole. Page 2037

The Transport of Tyrosine into the Human Brain as Determined with L-[1-¹¹C]Tyrosine and PET

Rate constants for the intransport of L-tyrosine across the blood-brain barrier were determined with PET in healthy controls and in patients with schizophrenia. Net utilization of tyrosine was lower in patients than in the controls, despite similar tissue concentrations of tyrosine. . Page 2043

A Decision Analysis Approach to the Treatment of Patients with Suspected Pulmonary Emboli and an Intermediate Probability Lung Scan

Using medical decision analysis, four management strategies for patients with suspected pulmonary emboli have been examined in terms of mortality and morbidity up to 6 mo post-presentation. Page 2050

Editorial: A Decision Analysis Approach to the Treatment of the

Patient with Suspected Pulmonary Emboli and an Intermediate Probability Lung Scan.... Page 2056

Technetium-99m-MAG₃ Versus Iodine-123-OIH: Renal Clearance and Distribution Volume as Measured by a Constant Infusion Technique

Clearance and distribution of MAG₃ and OIH were determined separately in six normal male volunteers using the constant infusion technique to validate single injection clearance techniques and, subsequently, the normal values for these parameters. Page 2057

Editorial: Quantitation of Renal Function Using MAG₃.... Page 2061

Detection of Suspected Primary Lung Cancer by Scintigraphy with Indium-111-Anti-Carcinoembryonic Antigen Monoclonal Antibodies (Type F023C5)

Immunoscintigraphy with indium-labeled anti-CEA-Mab was carried out in 66 patients strongly suspected of primary lung cancer and in 8 control patients suffering from different chest diseases. Page 2064

Editorial: Immunoscintigraphy for Lung Cancer Detection Reality Testing..... Page 2069

Inadequate Exercise Leads to Suboptimal Imaging. Thallium-201 Myocardial Perfusion Imaging After Dipyridamole Combined with Low-Level Exercise Unmasks Ischemia in Symptomatic Patients with Non-Diagnostic Thallium-201 Scans Who Exercise Submaximally

The additional value of dipyridamole in combination with low-level exercise for ²⁰¹Tl imaging was

studied in 15 symptomatic patients. Page 2071

Infectious Imaging with Indium-111-Labeled Nonspecific Polyclonal Human Immunoglobulin

Fifteen patients with suspected focal infection/inflammation were studied with nonspecific polyclonal immunoglobulin prepared from pooled human serum gamma globulin and labeled with ¹¹¹In. Page 2079

Improved Detection of Small Cavernous Hemangiomas of the Liver with High-Resolution Three-Headed SPECT

Technetium-99m-red blood cell scintigraphy was undertaken in 19 patients for the diagnosis of cavernous hemangiomas using a new three-headed SPECT system. Page 2086

A Comparison of Scintigraphy, Thermography, Ultrasound and Phlebography in the Grading of Varicocele

Two hundred and sixty-three patients were investigated with various modality combinations. The degree of abnormality for each modality was graded semi-quantitatively and the results compared. Page 2092

Follow-up Study of Postoperative Patients with Thyroid Cancer by Thallium-201 Scintigraphy and Serum Thyroglobulin Measurement

Following thallium-201 scintigraphy in 149 postoperative patients with thyroid cancer, serum thyroglobulin concentration was concomitantly evaluated in 86 of these patients. Page 2098

An Evaluation of Forearm Bone Mineral Measurement with Dual-Energy X-Ray Absorptiometry

In order to determine whether DEXA could be useful for bone mineral analysis of the forearm, its accuracy, precision and measurement performance to single-photon

absorptiometry were compared in 30 adult patients and volunteers. Page 2101

Safety of Dipyridamole-Thallium Imaging in High Risk Patients with Known or Suspected Coronary Artery Disease

The effects of oral dipyridamole suspension were studied in 400 consecutive patients to determine if certain subsets of patients were at greater risk of suffering major complications. Page 2107

Editorial: Dipyridamole/Thallium Imaging: How Safe Is It? When Should It Be Used? Page 2115

Tracer Feasibility for Monitoring Tumor Radiotherapy: Quadruple Tracer Study with Fluorine-18-Fluorodeoxyglucose, Fluorine-18-Fluorodeoxyuridine, L-[Methyl-¹⁴C]Methionine, [6-³H]Thymidine and Gallium-67

In a rat tumor model, metabolic tracers were used to assess the feasibility of monitoring tumor radiation therapy using a quadruple tracer technique. Page 2118

Editorial: Monitoring Tumor Radiotherapy Page 2124

The Localization of Indium-111-Leukocytes, Gallium-67-Polyclonal IgG and Other Radioactive Agents in Focal Inflammatory Lesions

Eight different agents were compared with ¹¹¹In-oxine-labeled leukocytes in an acute soft-tissue *E. coli* abscess and an acute arthritic lesion in 24 dogs. Page 2126

Indium-111-Labeled Low-Density Lipoprotein Binds with Higher

Affinity to the Human Liver as Compared to Iodine-123-Labeled Lipoprotein

The interaction of ¹¹¹In-LDL and ¹²³I-LDL with human liver-plasma membranes were investigated and compared. The results suggest that ¹¹¹In-labeled lipoproteins might be a better ligand for receptor binding studies. Page 2132

Neutron-Activated Holmium-166 Polyester Microspheres: A Potential Agent for the Internal Radiation Therapy of Hepatic Tumors

Biodegradable PLA microspheres containing stable ¹⁶⁵Ho-AcAc were reproducibly prepared by the solvent evaporation technique and later irradiated in a high neutron flux to produce therapeutic amounts of ¹⁶⁶Ho. Page 2139

Clinicopathologic Conferences: Lymphoscintigraphic Abnormalities in Venous Thrombosis. Page 2144

Benefit of Tomography in the Scintigraphic Localization of Cerebrospinal Fluid Leak

A CSF leak was demonstrated in a 42-yr-old female by tomography after planar acquisition failed to localize it. Page 2149

Simple Quantification of Regional Myocardial Uptake of Fluorine-18-Deoxyglucose in Fasting Condition

A simple FDG uptake index was used to compare fractional FDG uptake in 21 patients who underwent serial arterial blood sampling and to measure the normal range in each myocardial segment in the study of 10 normal, fasting subjects. Page 2152

Development and Clinical Application of an Automated Portable Tungsten-178/Tantalum-178 Generator

An automated, portable generator system was developed for use in first-pass radionuclide angiography studies with a multiwire gamma camera. Page 2158

Rapid Preparation and Quality Control Method for Technetium-99m-2-Methoxy Isobutyl Isonitrile

A microwave oven heating method and a new, expedient quality control system facilitate the rapid preparation of sestamibi. Page 2162

Myocardial Tissue Fraction—Correction for Partial Volume Effects and Measure of Tissue Viability

Two independent methods for correcting systematic underestimation in measurements of myocardial tracer concentration due to wall motion and transmural wall thickness in cardiac PET studies were compared in patients. Page 2169

Left Anterior Oblique and Geometric Mean Attenuation Correction of Gastric Emptying

Two methods of acquiring gastric emptying data (left anterior oblique imaging and the geometric mean of anterior and posterior counts) were compared in 20 patients using a power exponential curve fit to calculate a lag phase, an equilibrium emptying rate, and a half-time for gastric emptying. Page 2176

Continuing Education: Evaluation of the Thyroid Nodule. Page 2181