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Imaging Soft-Tissue Sarcomas with Labeled Fab Fragments	23
Myocardial Extraction of Labeled Bato Derivatives and Thallium	67
Nonuniformity of Tumor Dose in Radioimmunotherapy	75
DMSA Uptake in a Pheochromocytoma with Sipple's Syndrome	106
SPECT Imaging in the Diagnosis of Budd-Chiari Syndrome	118

A Full Table of Contents Begins on Page 3A, Annotations on Pages 7A-8A



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Clinical Pathologic Conferences: Pulmonary Hypertension Secondary to Chronic ThromboembolismPage 1

Cardiac Blood-Pool Imaging II: Applications in Non-coronary Heart Disease

A summary of the technical aspects of data acquisition and the utility of cardiac blood-pool imaging in patients with coronary artery disease. The applications of cardiac blood-pool imaging in valvular heart disease, hypertension, cardiomyopathy, and for the evaluation of right ventricular function are discussedPage 10

Imaging of Soft-Tissue Sarcomas with Indium-111-Labeled Monoclonal Antimyosin Fab Fragments

The authors succeeded in localizing soft-tissue sarcomas with ¹¹¹In-labeled monoclonal antimyosin Fab fragments in this study of 19 patients. However, their data also showed that tumors not stained for myosin could be imaged using antimyosinPage 23

Editorial: When Magic Bullets RicochetPage 32

MIBG Scintigraphic Assessment of Cardiac Adrenergic Activity on Response to Altitude Hypoxia

After an eight-day stay in high altitudes, [¹²³I]MIBG scintigraphy revealed a decrease in myocardial and pulmonary uptake in six male subjects. The authors conclude that the decrease is due to an hypoxia-induced alteration in myocardial adrenergic activity and pulmonary endothelial cell function.Page 34

Comparison of Fixed and Variable Temporal Resolution Methods for Creating Gated Cardiac Blood-Pool Image Sequences

Gated blood-pool image sequences were created for 50 subjects using the two acquisition methods. A comparison of results suggests that the fixed temporal method yields a more reproducible estimate of peak filling rate in resting subjects.Page 38

Precision of Regional Bone Mineral Measurements Obtained from Total Body Scans

Studies of the short- and long-term precision of regional estimates of bone mineral from whole-body scans concluded that bone mineral density was more precise than bone mineral content, and that long-term precision was poorer than short termPage 43

The Utility of Technetium-99m-DTPA Inhalational Scans in Artificially Ventilated Patients

Scans of 21 artificially ventilated patients, compared to 50 scans of patients breathing without assistance, suggest that [^{99m}Tc]DTPA aerosol scans in artificially ventilated patients may be associated with good peripheral penetration of activity and frequently yield valuable clinical information.Page 46

Nasal Radioiodine Activity: A Prospective Study of Frequency, Intensity and Pattern

Nasal radioiodine accumulation during iodine-131 whole-body scin-

tigraphy was studied in 21 patients. The authors conclude that without clinical suspicion of metastatic disease such accumulation is a normal finding, and should not be considered a criterion for further interventionPage 52

Cerebral Hemodynamics in Patients with Chronic Obstructive Carotid Disease by rCBF, rCBV, and rCBV/rCBF Ratio Using SPECT

The relationship of cerebral blood volume (measured with ^{99m}Tc-labeled red blood cells) to cerebral blood flow (measured with ¹³³Xe) was determined by sequential SPECT imaging in 21 patients with severe cerebrovascular disease.Page 55

Prognostication of Recovery Following Stroke Using the Comparison of CT and Technetium-99m HM-PAO SPECT

The authors have identified a relationship between perfusion defects (revealed by SPECT) and tissue loss (observed on CT), which may have prognostic utility following strokes which are limited primarily to the cerebral cortexPage 61

Comparative Myocardial Extraction of Two Technetium-Labeled Bato Derivatives (SQ30217, SQ32014) and Thallium

A new class of technetium-labeled compounds was studied in comparison to thallium in isolated, blood perfused rabbit hearts. In one of the bato derivatives, transcapillary exchange was greater than with thallium, suggesting good clinical potentialPage 67

Nonuniformity of Tumor Dose in Radioimmunotherapy

The implications of the nonuniform distribution of radiolabeled antibodies in the tumor, on energy deposition in tumor cell nuclei is discussed *Page 75*

Inhibition of Autoradiolysis of Radiolabeled Monoclonal Antibodies by Cryopreservation

While stressing the need to validate the theory for each antibody in question, the authors demonstrate that the freezing of therapeutic doses of monoclonal antibodies appears to be a simple and effective approach to the problem of autoradiolysis. *Page 84*

SPECT Dual-Energy-Window Compton Correction Scatter Multiplier Required for Tumor Quantification

Dual-energy-window Compton-scattering correction is defined for the accurate quantification of focal regions with higher than average uptake. Quantification was relative to a reference of known activity. *Page 90*

Iodophenylpentadecanoic Acid-Myocardial Blood Flow Relationship During Maximal Exercise with Coronary Occlusion

Despite the systemic underestimation of absolute flow, the initial deposition of radiolabeled IPPA during exercise reflects regional myocardial blood flow in normal and ischemic tissue *Page 99*

Pentavalent ^{99m}Tc(V)-DMSA Uptake in a Pheochromocytoma in a Patient with Sipple's Syndrome

Recent studies have suggested the possibility that scintigraphy may be used to diagnose and categorize tumors linked to Sipple's syndrome. The author's unexpected finding of ^{99m}Tc(V)-DMSA uptake by pheochromocytomas in a patient with Sipple's syndrome adds further complexity to the discussion *Page 106*

SPECT Imaging in the Diagnosis of Budd-Chiari Syndrome

While planar images revealed non-specific hepatocellular dysfunction alone, SPECT studies demonstrated increased uptake in the caudate lobe of the liver in a patient suffering from this uncommon condition *Page 109*

Indium-111 WBC Detection of Emphysematous Gastritis in Pancreatitis

The diagnosis of this rarity was initially suggested by a white blood cell scan, which demonstrated an inflammatory process in the gastric wall with apparent diffusion of the radionuclide toward the gastric lumen *Page 112*

Altered Biodistribution of Gallium-67 in a Patient with Aluminum Toxicity Treated with Desferoxamine

After observing altered biodistribution of [⁶⁷Ga]citrate in a hemodialysis patient in whom toxic serum levels of aluminum had been treated with desferoxamine, the authors conclude that, based on the known biologic interactions between gallium, aluminum, transferrin, and desferoxamine, toxic serum aluminum levels and desferoxamine therapy may cause altered biodistribution on [⁶⁷Ga]citrate scintigraphy *Page 115*

Radiopharmaceutical Factors in the Variable Quality of [^{99m}Tc]HM-PAO Images of the Brain

The authors study suggests that the variable quality of [^{99m}Tc]HM-PAO images of the brain can be attributed to differences in the time and mode of injection, rather than the differences between kits and/or the amount of pertechnetate added during preparation *Page 118*