

A number of ^{99m}Tc -chelates including ^{99m}Tc -tetracycline (^{99m}Tc -TC) and its analogs, ^{99m}Tc -glucoheptonate (^{99m}Tc -GH), ^{99m}Tc -diphosphonate (^{99m}Tc -DHDP) and ^{67}Ga were evaluated in the dog to determine (a) concentration in infarct relative to normal myocardium and surrounding tissues including liver, blood and bone and (b) rate of clearance from the blood. Twenty dogs were experimentally embolized using a catheter guide wire system introduced into the left main coronary artery under fluoroscopic control. ^{67}Ga citrate (5 mCi) was injected intravenously into 5 dogs at the time of infarction. The remaining dogs received 15-20 mCi of ^{99m}Tc -TC (9), ^{99m}Tc -GH (3)

and ^{99m}Tc -DHDP (3) 24 hr after infarction. All animals were sacrificed 48 hr after infarction. The infarct to normal myocardium ratio was 24 with ^{99m}Tc -DHDP, 11 with ^{99m}Tc -GH, 6 with ^{99m}Tc -TC and 1.5 with ^{67}Ga . The highest infarct to liver ratio was obtained with ^{99m}Tc -DHDP (8). The infarct to blood ratio was highest with ^{99m}Tc -GH (6). The infarct to bone ratio was 0.6 with ^{99m}Tc -DHDP. The blood clearance at 24 hr was greatest with ^{99m}Tc -DHDP and ^{99m}Tc -GH. The relatively high infarct concentration, the rapid clearance and its absence from the surrounding skeleton would appear to make ^{99m}Tc -GH the agent of choice for myocardial infarct imaging.

TECHNOLOGISTS' SCIENTIFIC PROGRAM

The following papers have been accepted for the Technologists' Scientific Program. Complete abstracts may be found in the June issue of the JOURNAL OF NUCLEAR MEDICINE TECHNOLOGY.

RADIOIMMUNOASSAY SHORT EFFICIENT METHODS BY POLYMERIZED ANTIBODY TABLET. Merri B. Benetazzo and Gerald H. Spirek. Sherman Hospital, Elgin, Ill.

CISTERNOGRAPHY USING ^{111}In -DTPA AND A SCINTILLATION CAMERA. Mark J. Cochran and Don R. Bernier. Edward Mallinckrodt Institute of Radiology, St. Louis, Mo.

EVALUATION OF A MULTI-IMAGING SYSTEM. Rao Dasika, Robert Tokarz, Teresa DiRienzo and Theodore Stahl. St. Peter's General Hospital, New Brunswick, N.J.

TECHNOLOGIST EXPOSURE CONTROL. Charles J. Dunn. Memorial Hospital, Hollywood, Fla.

THE RES-O-MAT E.T.R. TEST FOR THE DETERMINATION OF NEO-NATAL THYROID ACTIVITY. Gary D. Gallamore, Robert C. Spagnoli, Susan Sujansky, and Janie Frank. Jersey Shore Medical Center, Neptune, N.J.

THE USE OF AN EXPERIMENTAL MODEL IN THE EVALUATION OF RADIOIODINATED AUTOLOGOUS FIBRINOGEN. Paul F. Godin, Donald E. Tow and Daniel J. O'Connell. VA Hospital, West Roxbury, Mass.

CALCULATION OF THE RADIOPHARMACEUTICAL DOSE FOR THE PEDIATRIC PATIENT. Charles A. Henry and Edward G. Bell. Crouse-Irving Memorial Hospital, Syracuse, N.Y.

RADIATION SAFETY IN NUCLEAR MEDICINE. John R. Howley, Michael V. Green, Mardalee B. Dickinson, A. Eric Jones, and Gerald S. Johnston. National Institutes of Health, Bethesda, Md.

BLOOD POOL IMAGES IN CONJUNCTION WITH BONE AND BRAIN STUDIES. Elisabeth Kilburn and David L. Gilday. The Hospital for Sick Children, Toronto, Ont.

CARDIAC SCINTIGRAPHIC IMAGING USING A PHYSIOLOGICAL SYNCHRONIZER. John J. Kozar III, Kenneth A. McKusick, Gerald M. Pohost, and Majic S. Potsaid. Massachusetts General Hospital, Boston, Mass.

CONTAMINATION AND QUALITY CONTROL OF RADIOPHARMACEUTICALS. Peter P. Lamy and Donald R. Hamilton. University of Maryland School of Pharmacy, Baltimore, Md.

A ^{99m}Tc -AEROSOL INHALATION TECHNIQUE FOR LUNG SCINTIPHOTOGRAPHY. Max S. Lin, C.K. Erickson, C.L. Whiteleather, David A. Goodwin, and S.L. Kruse. VA Hospital, Palo Alto, Ca.

SMALL DIAMETER PINHOLES FOR HIGH RESOLUTION CAMERA IMAGING. E. Ling, C. Duxbury, J.G. McAfee and F.D. Thomas. Upstate Medical Center, Syracuse, N.Y.

AN "INSTANT" KIT METHOD FOR THE PREPARATION OF ^{99m}Tc LABELED INULIN FOR GAMMA-CISTERNOGRAPHY. Bernard Maher and Edward G. Bell. Crouse-Irving Memorial Hospital, Syracuse, N.Y.

THE EFFICACY OF ADMINISTERING SIMULTANEOUS ORAL NaClO_4 AND INTRAVENOUS $^{99m}\text{TcO}_4^-$ FOR BRAIN SCANNING. Mary E. Maxwell and Bonnie Baggenstoss. St. Paul-Ramsey Hospital, St. Paul, Minn.

EVALUATION OF MYOCARDIAL SCANNING WITH ^{43}KCl . Bonnie A. Mefferd, Richard W. Myers, and Gerald S. Johnston. National Institutes of Health, Bethesda, Md.

DUAL-RADIONUCLIDE MYOCARDIAL SCANNING USING A SCINTILLATION CAMERA. Linda L. Morrow. Ohio State University Hospital, Columbus, Ohio.

IN-VIVO DISTRIBUTION STUDIES OF TECHNETIUM-LABELED MACROAGGREGATED ALBUMIN. John H. Norris, Peter C. Stang, and Pinya Cohen. Bureau of Biologics, FDA, Bethesda, Md.

QUALITY CONTROL OF RADIOPHARMACEUTICALS IN THE COMMUNITY HOSPITAL. Walter L. Robinson. Bionuclears, Inc., Fanwood, N.J.

A RAPID RENAL SCREENING PROCEDURE USING A SINGLE DOSE OF ^{99m}Tc -DTPA. Herbert D. Strauss, Eva C. Nikawitz, and Mary Jane B. Zarzycki. VA Hospital, East Orange, N.J.

SCINTIGRAPHIC ISOTOPE MAMMOGRAPHY. Sybil J. Swann, Steven D. Richman, Camille L. Boyce, and Gerald S. Johnston. National Institutes of Health, Bethesda, Md.

PANCREAS IMAGING WITH COMPUTER ENHANCEMENT. Sharon M. Thorp. University of California Medical Center, San Francisco, Ca.

QUALITY CONTROL FOR THE RADIOIMMUNOASSAY. Robert Tokarz and Theodore Stahl. Middlesex General Hospital, New Brunswick, N.J.

ORAL ^{99m}Tc -PERTECHNETATE: AN AID IN THE DIFFERENTIATION OF EPIGASTRIC LESIONS. Susan Weiss and James J. Conway. The Children's Memorial Hospital, Chicago, Ill.

THE TECHNOLOGY OF IMAGING WITH ^{67}Ga CITRATE. Douglas B. Wigton. Penrose Hospital, Colorado Springs, Colo.