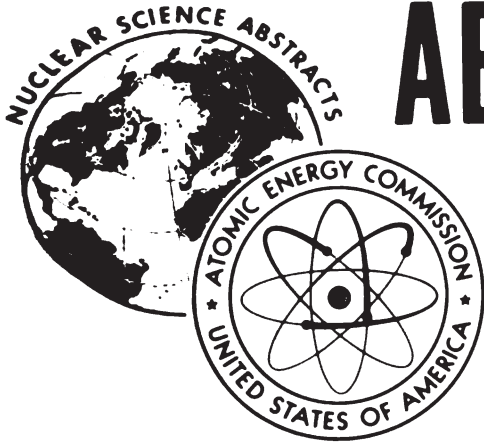




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types of renal failure. Recognition of radiation nephritis is important because of the possible benefit from cortico-steroid therapy in the evolutionary stage, and because removal of a unilaterally damaged kidney may cure the associated hypertension. Better prophylactic techniques for protection of the kidney are under investigation, and may eventually reduce the incidence and severity of this iatrogenic disorder. (auth)

12169 TECHNIQUE OF LARGE-FIELD X-RAY THERAPY OF PATIENTS DURING THE OPERATION. Shevchenko, I. T.; Khmelevskaya, V. N.; Nekrasov, P. Ya. (Scientific-Research Inst. of Roentgen-Radiology and Oncology, Kiev). Med. Radiol., 14: No. 1, 11-15 (Jan. 1969). (In Russian).

This method of operation using large-field radiation obviates certain technical difficulties and is conducive to an equal penetration of the radiation dose into the wound and on the surface. It also shortens the period of irradiation on the operating table. In large-field radiations a number of patients needs neither a preoperative nor postoperative course of external teleirradiation and that lessens considerably the general radiation load on the patient. The method of operative radiation in 57 patients suffering from malignant tumors was approved in the clinic. (auth)

12170 METHOD OF STERILIZATION OF CLOSED RADIOACTIVE ISOTOPES. Yakhontov, N. E.; Abelevich, L. G. Med. Radiol., 14: No. 1, 58-61 (Jan. 1969). (In Russian).

A new method for sterilization of closed radioisotopes is proposed. For this purpose cetylpyridinium chloride was used in a dilution of 1:5000. This preparation ensured a 100 per cent sterilization of closed radioisotopes when immersed in the solution for one minute. Studies of the reaction in animals, histologic preparations at different terms after administration of the substance, showed its nontoxicity and absence of morphological changes. Radiological clinic studies of cetylpyridinium chloride demonstrated its effectiveness and absence of any complications in patients. (auth)

12171 EXPERIENCE IN OPERATING A LINEAR ACCELERATOR OF ELECTRONS WITH AN ENERGY OF 5 MeV. Pavlov, A. S.; Kvasov, V. A. Med. Radiol., 14: No. 1, 32-8 (Jan. 1969). (In Russian).

The design and dosimetric characteristics of a therapeutic linear accelerator with an energy of 5 MeV is described. The accelerator works in a bremsstrahlung regimen. The first clinical results of treating malignant neoplasms of diverse localization are reported. (auth)

12172 THE CALCULATION ON THE DOSAGE OF PREPARATIONS REDUCING THE DEPOSITION OF ^{90}Sr IN THE ORGANISM. Dubrovina, Z. V.; Dolmatova, M. Yu.; Malkin, P. M.; Nesterenko, V. P. Med. Radiol., 14: No. 1, 28-31 (Jan. 1969). (In Russian).

In experiments on rats, the protective effects of different preparations against ^{90}Sr was studied: alginate acid, sodium alginate, ammonium oxalate and sodium phytate. It was found that in first approximation the optimally effective dose of the substance may be calculated by its equivalent weight and content of calcium in the ration. For all four substances studied this dose corresponded to the ratio — 1 gm/equivalence of Ca to 3 to 4 gm/equivalence of protective preparation. (auth)

12173 ^{51}Cr -DTPA IN RENAL DIAGNOSIS. Deckart, H.; Flentje, H.; Herzmann, H. (Nuklearmedizinische Abteilung der Radiologischen Klinik, Berlin. Institut fuer Angewandte Isotopenforschung, Berlin). Nucl.-Med., 7: 205-11 (Oct. 31, 1968). (In German).

The chelate-forming diethylenepentaminoacetic acid (DTPA) was labeled with ^{51}Cr . Clearance studies demonstrated that the complex, like ^{51}Cr -EDTA, is excreted by the kidneys by means of glomerular filtration. Results obtained indicate that its diagnostic use is similar to that of ^{51}Cr -EDTA. (auth)

12174 RADIOISOTOPE RENOGRAPHY DURING FUROSEMIDE (LASIX) DIURESIS. Rado, J. P.; Banos, Cs.; Tako, J. (Janos Hospital, Budapest). Nucl.-Med., 7: 212-21 (Oct. 31, 1968).

In 20 selected patients, isotope renography was done in dehydration and during diuresis induced by the administration of furosemide (Lasix). In 19 patients a significant disparity between the tracings of the two kidneys was found in the dehydration renogram. The disparity disappeared during furosemide diuresis in patients with mild ureteropelvic obstruction, different forms of hypertension, pyelonephritis but without substantial loss of functioning renal mass. In five cases in which intravenous pyelography demonstrated significant differences in size between the two kidneys, the disparity between the tracings in the control renogram did not change substantially during furosemide diuresis. Furosemide diuresis seemed to be helpful in the evaluation of apparently abnormal renograms.

The furosemide renogram may, in selected patients, be advantageous in isotope renography involving high diuresis. (auth)

12175 INFLUENCE OF AORTOGRAPHY ON THE RADIOISOTOPE RENOGAM. Malamos, B.; Christeas, N.; Gyftaki, E.; Balas, P.; Alevizou-Terzaki, V. (Univ. of Athens). Nucl.-Med., 7: 222-30 (Oct. 31, 1968).

This study concerns the influence of translumbar aortography on the radioisotope renogram. A correlation was made between the renogram tracings before and after aortography. Translumbar aortography affects radioisotope renogram tracings if the tracings are normal before aortography, in 31.5% of the studied cases. No correlation was found between the abnormal post-aortographic renogram tracings and the time elapsed from the aortography during the first week, the level of injection or the amount of the injected dye. It is recommended that the radioisotope renogram should be performed seven days after aortography for obtaining reliable tracings. (auth)

12176 ^{99m}Tc IN THYROID SCINTIGRAPHY. Umek, H.; Czembirek, H. (Medical Univ., Vienna). Nucl.-Med., 7: 231-9 (Oct. 31, 1968). (In German).

Studies in over 100 patients indicate that ^{99m}Tc -pertechnetate is, for several reasons, superior to ^{131}I in scintigraphic studies of the thyroid. It should definitely be used in juvenile patients and in patients receiving thyroid hormones. The problems arising from the simultaneous concentration in the gastrointestinal mucosa and in the salivary glands are discussed. The possibility of increasing the excretion of this radionuclide by oral administration of perchlorate is mentioned. (auth)

12177 SIGNIFICANCE OF THE HORMONAL ACTIVITY OF PARATHYROID ADENOMATA FOR SCINTIGRAPHY WITH ^{75}Se -SELENOMETHIONINE. Haubold, U.; Frey, K. W.; Karl, H. J. (Univ., Munich). Nucl.-Med., 7: 240-50 (Oct. 31, 1968). (In German).

In 10 patients with primary hyperparathyroidism, scintigraphy with ^{75}Se -selenomethionine was done before surgery. In 6 patients the positive scintigraphic findings were confirmed surgically. In 2 patients additional tumors were not visualized. The capability of the scintigram to visualize parathyroid adenomata is primarily determined by their hormonal activity. Adenomata with low endocrine activity cannot be seen in the selenomethionine scintigram. In this series confirmed parathyroid adenomata were not visualized when the serum calcium concentration was below 5.8 mVal/l. A review of the published cases of other authors indicates a similarly high limit. In view of these findings, the value of parathyroid scintigraphy appears to be limited. The application of this technique is only justified by the fact that in contrast to the radiological methods it is without risk to the patient but has a similar diagnostic accuracy. In patients with negative scintigrams additional radiological visualization should be attempted. (auth)

12178 DEMONSTRATION OF SPACE-OCCUPYING LESIONS IN THE SPINAL CANAL BY MYELOGRAPHY WITH ^{99m}Tc -PERTECHNETATE. Akhtar, M.; Winkler, C.; Betz, H. (Univ., Bonn). Nucl.-Med., 7: 251-6 (Oct. 31, 1968). (In German).

A method of scintigraphic demonstration of space-occupying lesions in the region of the spinal canal is described. In contrast to techniques used hitherto, the test substance is ^{99m}Tc in the form of pertechnetate, so that the myeloscintigraphy can be performed without hazards. Very valuable diagnostic results are obtained in a relatively short period of time. (auth)

12179 RADONOVYE VODY I IKH LECHEBNOE PRIMENENIE. (Radon Waters and Their Therapeutic Properties). Smirnov-Kamenski, E. A.; Petelin, S. M. Biblioteka Prakticheskogo Vracha. Moscow, Izdatel'stvo Meditsina, 1966. 216p.

Basic data are given on radioactive decay and ionizing radiation in radon waters. A list of health resources using therapeutic properties of radon-containing waters are described. Dosimetry and alpha-therapy doses, effects, and preparation, and uses of artificial radon waters are evaluated. (R.V.J.)

12180 MEDICAL CARE OF WORKERS SUBJECTED TO IONIZING RADIATION. Jammet, H. P. (Commissariat a l'Energie Atomique, Fontenay-aux-Roses, France). pp 511-16 of Radiation Protection. Part 1. Snyder, W. S.; Abec, H. H.; Burton, L. K.; Maushart, R.; Benco, A.; Duhamel, F.; Wheatley, B. M. (eds.). New York, Pergamon Press Inc., 1968. (In French).

From 1st International Congress of the International Radiation Protection Assn., Rome, Italy. See CONF-660920-(Vol.1).

Radiological protection depends essentially on the prevention and the control of radiological nuisances by the appropriate technological procedures and dosimetric methods. The medical procedure has the purpose of controlling the health of workers exposed to ionizing radiation and to assure the necessary care for