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VALUE OF GA-67 SCINTIGRAPHY FOR DETECTION OF EXTRAHEPATIC METASTASES OF HEPATOMA. K. Kaneko, C. Nakayama, H. Nakata and S. Takahashi. University of Occupational and Environmental Health School of Medicine, Kitakyushu.

We evaluated the value of Ga-67 scintigraphy for detection of extrahepatic metastases of hepatoma on 46 confirmed cases. The primary tumor was positive in 34 of 46 cases (74%). The extrahepatic site was positive in 13 cases (28%) in the bone and in 2 cases (4%) in the lung. Chest roentgenograms showed multiple metastatic nodules in the 2 cases with abnormal Ga-67 uptake in the lung. But no abnormalities were detected on bone roentgenograms in 8 of 13 cases with abnormal uptake in the bone.

Values of  $\alpha$ -fetoprotein, CEA and Alkali-phosphatase in serum were not correlated with the abnormality on Ga-67 scintigraphy in terms of extrahepatic metastases.

We conclude that Ga-67 accumulates not only in the primary focus but also in the metastatic focus of hepatoma and Ga-67 scintigraphy should be scrutinized for these additional informations.

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DIAGNOSTIC APPROACH to PRIMARY BREAST CANCER USING Tc-99m-EHDP. M. Kumano, K. Fujii, T. Miyoshi, O. Ishida, M. Kuroda, O. Ocbiraki, T. Sakashita. Dept. of Radiology, H. Shibata, Z. Iwasa. Dept. of Surgery, Kinki University Hospital, A. Kajita. Dept. of Radiology, Center for Adult Diseases, Osaka.

Having assessed that Tc-99m-EHDP might be of value in the differential diagnosis of breast masses, we performed routine bone scans with it on patients with diseases of the breast prior to biopsy and mastectomy. All patients were given an IV injection of 15 mCi of the radionuclide. A breast scan and a whole body scan were performed 20 minutes and 3 hours after injection, respectively. (43 cases)

The mammographic and isotopic assessment findings were then compared. According to TNM classification, there was a high correlation between tumor size and increased uptake of the scanning agent in the area of carcinomas. However, a linear relationship was not found to exist between malignant calcifications found upon mammograms and uptake of the nuclide in the regions of pathologically proved breast carcinomas. Although our results can be considered preliminary, we feel that dynamic studied may offer further insight into the pathophysiology of breast carcinoma, such as blood flow to lesions, and may in the future prove useful for differential diagnosis.

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EVALUATION OF OVARIAN TUMOR BY GA-67 COMPUTER SCINTIGRAPHY. M. Nishi, T. Fujita, N. Akamatsu, S. Fukumoto, K. Sekiba and K. Aono Okayama University School of Medicine. Okayama

Ga-67 scintigraphy in 53 cases of suspected ovarian mass lesion by ultrasound was evaluated based on the histopathological study. Obtained scintigrams were classified into 5 grades from (+2) to (-2) by the comparative study of Ga-67 uptake between mass lesion and its background. 18 cases presented the positive image, (+2) or (+1) and these were all malignant or low grade malignant case with the diameter over 5 cm. On the other hand, the negative image, (-2) or (-1), was observed in 25 cases: 22 (88%) benign, 23 over 10 cm. The remnant 10 cases were poorly delineated showing the uptake ratio (0) and were all below 10 cm containing one malignant case over 5 cm. These result shows that Ga-67 computer scintigraphy highly contributes to the preoperative evaluation of the ovarian tumor with the diameter of over 5 cm.

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Diagnostic Evaluation by Whole Body Imaging of Intra-arterially Infused Tc-99m Macroaggregated Albumin (MAA). H. Ichinohe, J. Tanaka (Serious Diseases Institute, Kosei Hospital, Aomori.)

I putted narrow catheter-top into the ventricle of the heart or into the aorta by using venous cannula (V1) and teflon catheter (outside diameter 1.0mm, inside diameter 0.5mm, 120cm in length) as like Seldinger's method (catheter-replacement-technique). Then the whole body scanning showed the distribution pattern of infused RI (Tc-99m-MAA) through this narrow catheter by using a gamma camera. Both the whole body scannogram and ROI scintigram showed focuses according to blood flow rate. Tumor or inflammatory focuses showed abnormal accumulation shadows of RI. Abscess showed doughnut like shadow. But hematoma or cyst showed negative accumulation shadows of RI. Clinical 110 cases were performed and reported.

References (1) Radioisotopes, 27, 35~38, (1978)

(2) Radioisotopes, 29, 533~538, (1980)

(3) Radioisotopes, 31, 104~106, (1982)