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RENAL SINGLE-PHOTON ECT. H. ISHIDA, S. SHIRAKAWA, W. KUTANI, R. FUNAKI, M. TAKEUCHI, T. FUKUDA and H. AKAGI. Department of Radiology, Osaka Medical School, Takatsuki, Osaka.

Renal single-photon ECT was performed on patients with renal diseases, and detectabilities of renal mass lesions were evaluated on ECT, X-ray CT, Ultrasonography and conventional static scintigraphy. Multi-projective data were obtained by using a rotating table on which patients stand to the gamma camera or using a detector which rotated around the long axis of patients who lie in a gantry. The size of renal long axis is shortened, and retroverted slightly at standing position on the rotating table. The normal renal ECT image with 3-7 mCi of Tc-99m-DMSA were displayed as a round or oval form and renal pelvis was observed as a low uptake region. Fifteen renal mass lesions were analyzed with X-ray CT, ECT and Ultrasonogram. Fourteen lesions were seen with the X-ray CT and Ultrasonogram and 11 lesions were detected by the ECT. Three false-negative cases with ECT were renal cysts which diameters were less than 3 cm. Detectability of 21 renal space-occupying lesions were compared among conventional posterior projection images,multi-projection images and ECT images. There was no significant difference of detectabilities among three imaging techniques, but S.O.L was identified with ease by ECT and multi-projecting images as contrast to conventional scintigram.

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STUDY FOR TUMOR IMAGING OBTAINED WITH EMISSION COMPUTED TOMOGRAPHY USING MAXI-CAMERA 400T(GE). M.Fukunaga, T.Fujita, C.Shigeno, N.Tamaki, T.Mukai, R.Morita and K.Torizuka. Dept. of Radiology and nuclear Medicine, Kyoto University Hospital, Kyoto.

In order to clarify a usefulness of emission computed tomography(ECT) on tumor imaging, we have studied the scintigraphy with Ga-67 in patients with various of malignancy. After a conventional Ga-67 scan was done, ECT was performed with rotating gamma camera(maxi-Camera 400T,GE) in a form of multiple section slices not only in trnsaxial but also in frontal or sagittal whatever we wanted.

(1) Lung cancer with bone metastasis on lower thoracic spine. On Ga-67 scan, the abnormal accumulation was observed on primary site and the back. On the other hand, bone scan could not be shown the abnormal accumulation on lowerthoracic spine. ECT was able to point out the exact location of abnormal accumulation with Ga-67.

(2) Breast cancer with bone and skin metastasis. A conventional Ga-67 scan showed the abnormal accumulation on skin lesion, while the accumulation on lung metastasis was unknown. ECT could be shown the abnormal accumulation on lung lesion.

In conclusion, Ga-67 ECT using rotating gamma camera proved to be practical method by potentating the conventional scintigraphy.