

cluding tomophotos were studied 262 times. Among these cases, renal tumors and cysts, and cystic diseases were analysed in many ways.

Scintillation camera which was used was Pho/gamma III Anger camera and scanning agents were ^{131}I -Hippuran, $^{99\text{m}}\text{TcO}_4$ and $^{99\text{m}}\text{Tc}$ -PAC ($^{99\text{m}}\text{Tc}$ -penicillamine acetazolamide complex). After 300–500 μCi of ^{131}I -Hippuran was injected, serial 2 minutes exposure scintiphotos were obtained. In the same way, 10–15 mCi of $^{99\text{m}}\text{TcO}_4$ was injected and 2 second time lapse images were obtained. 40–60 minutes after injection of TPAC (2 mCi), renal parenchymal static images were obtained. Each images compared with other images, excretory urogram and renal angiogram.

The following results were obtained. A malignant neoplasm was seen as a mass on the excre-

tory urogram, as a functional defect in the Hippuran scintiphoto and as a vascular brush in the radiopertechnetate scintiphoto and angiogram. But in the neoplasms which had some necrotic lesions, there were cold areas in the pertechnetate images. It was often misdiagnosed as a cyst, so it must be confirmed by selective angiography as malignant neoplasms. In the most cases, images of the malignant neoplasms with radiopartechnetate appeared so early after injection as to differentiate from normal tissue and continued about 60 seconds longer than normal. It seems to be the significant sign to find out malignant tumor. TPAC, a new renal scanning agent, is a excellent material to make images for cystic renal diseases. In our 9 cases, it gave clear images even in the azotemic patients.

Differential Diagnosis between Functional and Organic Impotence by the Use of Isotopes

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The radioisotope penogram, which measures changes of blood flow through the penis by the aid of isotopes, was developed and applied as a method of objective differentiation between functional and organic impotence. In the present study, the changes of the radioisotope penogram curve were studied following drug administration or visual sexual stimulation. In patients with functional impotence, the penogram curve rose

in response to drug loading or visual sexual stimulation. However in cases which there was an organic disturbance in the part of the nervous system which participate in erection, including the upper erection center, there was no change in the penogram curve by drug loading or visual sexual stimulation, despite sexual excitation in response to visual sexual stimulation. Therefore, a differential diagnosis was possible.