Diagnostic Value of Scanning in Renal Tumors

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Two diagnostic procedures, renal scanning and renal angiography were compared for evaluation of their diagnostic value on a total of 21 patients with renal tumor; (hypernephroma, pelvic tumor, Wilm's tumor) and the following results were obtained.

Hypernephroma: The ratio of effective diagnosis in all cases examined was 89% with renal scanning, 100% with renal angiography.

Renal pelvic tumor: The ratio of effective diagnosis was 100% with renal scanning and 75% with angiography.

Wilm's tumor: The ratio of effective diagnosis was 100% with renal scanning.

Comparison of RI-Nephrographies for Detecting Space-Occupying Lesion of the Kidney

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The usefulness of RI-nephrographies including renogram, renoscintigram and gamma-photograph of the kidney is in the easy detection of unilateral renal lesion and/or space-occupying lesion of the kidney. The present paper was some comparisons of RI-nephrographies in respect to detection of space-occupying lesion of the kidney.

Renogram using ^{131}I-o-iodohippurate, and scintigram using ^{203}Hg-chlormerodrin were recorded as usual. Serial gamma-photos of the kidney were obtained from the back of patient in prone position, with Pho/Gamma III scintillation camera using ^{131}I-o-iodohippurate or ^{99m}Tc-pertechnetate.

Materials were 33 patients with space-occupying lesion of the kidney, of which diagnosis had been established.

Results: (1) Scintigram of the kidney was the most useful in detection of space-occupying lesion of the renal parenchyma; scintigram illustrated a renal cyst as a clear defect as small as a ping-pong ball. Diagnostic success with scintigram, was the following results: 2 of 3 cases of renal cancer, all of 3 renal cyst, 3 of 4 polycystic kidney, all of 8 renal infarction, and all of 2 renal arteriovenous fistura. But scintigram failed to illustrate clear image in most cases of abnormalities of the renal pelvis. (2) Although gamma-photograph was inferior to scintigram in detection of space-occupying lesion of the kidney, it gave useful information upon the differentiation of a renal pelvic asthenia from hydronephrosis due to obstraction of the urinary tract, where gamma image illustrated clearly the site of obstraction. (3) Further observations were required in clear separation of renal malignancy from cyst with gamma-photograph using ^{99m}Tc-pertechnetate. (4) Renogram gave simple information showing an unilateral depression of the affected side, whether it was space-occupying lesion or arterial stenosis.

Conclusions: Gamma-photograph was not always superior to scintigram in the detection of space-occupying lesion of the kidney.