results a renographic curve are reproduced simultaneously. Therefore the scintillation camera can also act as a renogram. The renal examination with the scintillation camera is superior on a functional test with morphological changes, inflammation, some kinds of tumor, hydronephrosis, uremia and transplanted kidney. On the other hand, about the detail of morphological changes, other morphological examinations are superior. Several cases will be demonstrated at the meeting.

Radioisotope Renogram in the Renal Transplantation

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From two to 11 serial renograms of transplanted kidneys were obtained in 11 patients using the following technic.

Ten microcuries of $^{131}$I labeled orthiodohippurate was injected intravenously. Radioactivity was determined with a heavily shielded 1×1 in. sodium iodide crystal scintillation probe connected to a ratemeter and recorder.

Using a time constant of 1 sec., full scale deflection of 30,000 counts/min., radioactivity was recorded over the homograft for 20 min. Patients were in the supine position. Crystal to skin distance was about 8 cm.

Persistence of normal tracings over a prolonged period has been observed thus far only in recipient of graft from identical twin.

In many homograft rejection crisis, the slope of the first forty-five seconds of the tubular phase (tan $\theta$) has decreased.

One important factor for the success of kidney transplantation is early recognition and adequate therapy of the rejection crisis.

Improvement or deterioration of renogram configuration parallels similar changes in clinical symptoms (pyrexia, increasing or decreasing urinary output etc.) and in other renal function tests, especially blood urea nitrogen, serum creatinine and creatinine clearance.

Renogram of Homotransplanted Kidneys

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More than 140 series of $^{131}$I-hippuran renograms were obtained from 9 homotransplanted kidneys at our clinic for the past 2 years. We have observed various complications such as rejection phenomenon, obstruction of the ureter, complete occlusion or stenosis of renal vessels, associated with reduction of kidney function. It is mandatory to make prompt-differential diagnosis for proper treatment of these complications. The renographic findings of transplanted kidneys with stenosis of renal artery and renal vein demonstrated similar patterns and differential diagnosis was almost impossible by renographic method. While, non-functioning patterns of renography was illustrated at transplanted kidneys with complete occlusion of renal artery. It was not unusual that renography of homotransplanted kidneys at rejection phenomenon showed the same renographic patterns seen at complete occlusion of the ureters.

Differential diagnosis of these two categories seemed to be almost impossible, however, it was our vague impression that the former