

(Aloka: DLA-N12-187) using ^{131}I RISA. Three scintillation detectors were used, one was positioned over each kidney and one over the back of the chest toward the heart. After complete mixing of RISA in the vascular compartment, a proportional estimate of the blood background in each renal region derived from the RISA measurement was

made. And then, each renal Hippuran curve was corrected for this blood background.

The subtracted renogram was obtained as the curve which were derived from the ^{131}I Hippuran solely in the renal parenchyma exclusive of circulated media in the blood stream.

An Automatic Analysis of ^{133}Xe Clearance Curve by Digital Computer

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The methods to calculate the regional cerebral blood flow from ^{133}Xe clearance curves are examined. The first one is hight over area method in which regional cerebral blood flow is calculated from a hight at zero minute, a hight at ten minutes and an area under the clearance curve. The second one is two minutes method in which regional cerebral blood flow is calculated from the slope of logarithmic clearance curve during first two minutes. The third one is two com-

partmental analysis method in which a clearance curve is simulated to two exponentially decreasing curves, i.e. fast component and slow component, and then regional cerebral blood flow of each component and each relative weight are calculated respectively.

The results of calculation are printed each time. And each clearance curve, simulated curve and logarithmic clearance curve during first two minutes can be displayed on CRT in case of need.

Kinetic Studies of the Kidney by the Use of The Interest Area Renogram

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With a use of a scintillation camera, 4096 channel analyzer with alterneus system, and a magnetic taperecorder in recording and playback, kinetic studies of the kidney in different areas of interest were carried out.

Renal functions were evaluated by the interest area renogram, following intravenous injection of ^{131}I -hippuran 400 μCi , and the

renal blood flow was also measured by intravenous administration of $\text{Tc}^{99\text{m}}$ 6 mCi. The dose of these radioisotope compounds were decided considering various significant factors, such as a size of the area of interest, a length of the accumulating time by alterneus system to obtain a satisfactory image, anatomical-physiological characteristics of