CORRELATION OF EFFECTIVE RENAL PLASMA FLOW (ERPF) AND MEAN TRANSIT TIME (MTT) ON THE RENOGRAM USING I-131-HIPPURAN.


We reported a method to estimate ERPF of a single kidney from the renogram and 30 minute excretion rate on bladder by external counting using I-131-hippuran in the previous meeting of this society.

Recently, MTT calculated by deconvolution analysis is considered to be a favorable parameter of a kidney, because the influence of the input curve is overcome.

According to A. Piepsz et al. (Brit. J. Radiol. 55:419, 1982), H(1) and MTT were calculated in our hospital since last year. The aorta was used as an input curve and the renogram curve was corrected by subtraction of tissue background.

K. MTT correlates with ERPF in cases from normal to hypofunctional kidneys and H(1) also shows a good correlation with ERPF.

FACTORS AFFECTING DEPOSITION OF Tc-99m-DMSA IN THE LIVER (II).


It is not infrequent that the liver and spleen are depicted in renal imaging with Tc-99m-DMSA. In the 22nd annual meeting, we reported the degree of accumulation in the liver and spleen corresponded well to the elevation of Complex I/Complex II (C-I/C-II) in Tc-99m-DMSA solution. This study was undertaken to know the difference in the degree of delineation of the liver when Tc-99m pertechnetate (2 kinds) was matched against DMSA (2 kinds). The combination caused the significant increases of C-I/C-II value and of frequency of liver depiction. In the combination, C-I/C-II value changed markedly with time. Another study on the formation of C-I was performed using homemade Tc-99m-DMSA. When the concentration of Tc-99m pertechnetate and SnCl₂ were kept constant and the concentration of DMSA was increased, C-I/C-II value decreased. In addition, when the concentration of SnCl₂ was increased, C-I/C-II was increased exponentially. On the other hand, the concentration of Tc-99m pertechnetate did not affect C-I/C-II. From these studies, C-I/C-II appeared to depend largely on the concentration of DMSA and SnCl₂ as well.