

COMPARISON WITH PLASMA DISAPPEARANCE
BETWEEN ^{99m}Tc -PI (PYRIDOXILIDENE-ISOLEUCINE)
AND ICG (INDOCYANINE GREEN).

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The recent development of ^{99m}Tc labelled agents made it possible to obtain diagnostic information on hepatobiliary disease. ^{99m}Tc -pyridoxilidene-Isoleucine (^{99m}Tc -PI) was applied for assesment of hepatobiliary function and the results were compared with Indocyanine Green (ICG) test. ^{99m}Tc -PI test and ICG test were performed in 4 cases of normal controls, 5 of chronic hepatitis, and 4 of liver cirrhosis. ^{99m}Tc -PI concentration in plasma showed linear on disappearance curve within 3 minutes after an injection. Although the first disappearance of ^{99m}Tc -PI revealed faster than ICG, the retention rate and the disappearance rate of both substances showed reversed significant correlation. The difference of the retention rate between ^{99m}Tc -PI and ICG was apparently observed in cases of liver cirrhosis, in whom the renal excretion was shown by ^{99m}Tc -PI scintigraphy. From these results the different transport may be responsible for excretion of ^{99m}Tc -PI and ICG.

KINETICS AND IMAGING OF HEPATOBILIARY TRACT AS
OBSERVED BY USING ^{99m}Tc -PYRIDOXYLIDENEISOLEUCINE (PI)
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Kinetics and imaging of hepatobiliary tract were studied by using ^{99m}Tc -pyridoxylideneisoleucine (PI) in 10 normal volunteer subjects, 7 patients with chronic hepatitis, 3 patients with bile duct obstruction, 3 patients with gallbladder stone, and other 3 miscellaneous cases. In patients with chronic hepatitis, the delay of PI turnover, and image abnormality of hepatobiliary tract were observed. In patients with the obstruction of biliary tract, the delay of PI turnover was very marked, and the excretion of PI into the intestine was not observed. In patients with gallbladder stone, the gallbladder was not visualized in all cases. However, the PI turnover and excretion into the intestine were not so disturbed as compared to the cases of obstruction of biliary tract.

In general, more abnormalities (16/16) were observed by imaging such as the swelling and uneven liver uptake, dilatation of hepatic and common bile duct, and dislocation and deformity of the gallbladder, than by kinetics (8/15) such as plasma PI disappearance rate, hepatic uptake time, hepatic disappearance rate, gallbladder concentration and excretion. The largest difference between normal and other pathologic cases was observed in hepatic uptake peak time.

Rapid turnover of PI simplified the examination of hepatobiliary tract from the both sides, kinetics and imaging. The image by ^{99m}Tc -PI is sharper than that by ^{131}I -BSP and ^{131}I -RB.