

using ^{198}Au -Colloid. It is revealed in this result that the lymphatic flow is reduced in case of decreased KL value and high splenic and the bone marrow uptake, which usually seen in the fibrotic

This result might lead to our concept that the degree of prolongation of $T(1/2)$ of RISA in-

dicates the degree of fibrotic lesions in the liver. changes in the liver histological findings.

$T(1/2)$ value is closely correlated with the decrease of cholinesterase level and the increase of the γ -globulin level.

Dynamic Studies on the Functions of the Hepatobiliary System using I-131 Rose Bengal

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To assess hepatic parenchyma and biliary functions, I-131 Rose Bengal was applied to measure the regional hepatic hemodynamics using the external counting method.

A total of 47 patients, both with diffuse liver disease and without it, had the following diagnoses: cholecystitis with or without cholelithiasis in 29, acute hepatitis in 4, chronic hepatitis in 3, liver cirrhosis in 4 and no liver disease in 7. Each case was injected intravenously with 300 μCi of I-131 Rose Bengal while fasting condition.

The information from the liver was recorded with a gamma camera (Toshiba, Japan) to the Videotape for 100 minutes after the injection through the VTR on line system. At 600 minutes after the injection, two tablets of Yolk were administered as a stimulus to the gall bladder. Two separate regions of interest were selected at the right lobe of the liver and the gall bladder zone.

The uptake and excretion curve from the right lobe of the liver was analysed as the serum of exponential components.

The averages of the half-time of each component were as follows: 4.3, 12.2, 78.2 min. in no liver disease; 4.3, 119, 75 min. in cholecystitis with or without cholelithiasis; 4.5, 11.0, 100 min. in acute hepatitis; 6.5, 17.1, 219 min. in chronic hepatitis; and 6.5, 17.1, 134 min. in liver cirrhosis. The relationship of half-time of the first component to the liver uptake rate constant of Au-198 colloid was significant ($r=0.71$, $p<0.05$). The half-time of the second component was well correlated with the injection to peak time in the curve of I-131 Rose Bengal ($r=0.61$, $p<0.01$).

In conclusion, the first component of the uptake and excretion curve would appear to indicate the liver blood flow, and the second component the function of the liver polygonal cells.