

A new liver functional study using Tc-99m DTPA-galactosyl human serum albumin: Evaluation of the validity of several functional parameters

Kiyoshi KOIZUMI, Guio UCHIYAMA, Takao ARAI,
Takao AINODA and Yoshioki YODA

Departments of Radiology and Internal Medicine, Yamanashi Medical College

Several parameters calculated with a new functional imaging agent for the liver, Tc-99m DTPA-galactosyl human serum albumin, were evaluated in 9 patients with liver cirrhosis, one with hepatocellular carcinoma, and five with both liver cirrhosis and hepatocellular carcinoma. LU3, which represents the cumulative uptake of the tracer from 3 to 4 minutes after injection, showed a strong correlation ($r=0.858$, $p=0.0001$) with LHL15, which represents the count ratio for the liver to sum for the liver and heart 15 minutes after injection of the tracer. It also showed a strong correlation ($r=-0.896$, $p=0.0001$) with the indocyanine green retention rate (ICGR15). Regional ICGR15 is therefore calculable from the regional LU3. GSAR15, which represents the radioactivity of the tracer retained in the blood 15 minutes after injection, showed a strong correlation ($r=0.878$, $p=0.0001$) with HH15, which represents the count ratio for the heart 15 minutes after injection of the tracer divided by the count for the heart 3 minutes after injection. In conclusion, LU3 and GSAR15 are interesting and promising parameters for assessing liver function.

Key words: Tc-99m DTPA-galactosyl human serum albumin, Tc-99m GSA, liver function