Statistics of Liver-Scannings by Edge-Punched Cards

Y. SUZUKI, K. HISADA and S. RIKIMARU
Department of Radiology, School of Medicine, Kanazawa University, Kanazawa
H. YOKOYAMA and S. FURUMOTO
Toyama Prefecture Central Hospital

From May 1962 to September 1967 were performed 2069 liver-scannings in our depertment and confirmation of the diagnosis was established in 613 instances. Objected diagnosis was established autopsy, laparoscopy, biopsy, laparotomy and follow up over one-year period on the basis of the clinical course and biochemical dates.

The originally designed edge-punched cards were prepared and very useful to review of many instances. In this series, there were 57 instances of normal liver, 49 instances of chronic hepatitis and 67 instances of cirrhosis. It was our purpose to measure the size of the scanning belonging to these three kinds.

The dimension of the liver were studies in 20% cut-off scintiscannings. In normal instances, right widths were ranging 10 to 15 cm. The majority of chronic hepatitis and cirrhosis were within normal range, so there were not diagnostic value in right width alone. But it should be noted that the all instances under the 9 cm were cirrhosis. Left widths were ranging from 5 to 9 cm in normal liver. Chronic hepatitis and cirrhosis were almost scattered in normal range, so left widths alone were not valuable. But, in these cases, there were relative enlargement of the left width to the right one. Particulary, this tendency was proved in cirrhosis.

In liver-scanning, appearance of the spleen had great diagnostic value. Spleen was never visualized in the normal instances, not vice versa. The great part of chronic hepatitis ranged under the 6 cm length. Among those instances over the 7 cm, 82% of which were cirrhosis.

Hepatic Function Test by Means of Radioisotopes

SAN-JINN LIN and D. ISHIKAWA
Department of Radiology, Faculty of Medicine, University of Tokyo, Tokyo
H. YASUKOCHI and T. MIYAMAE
Department of Radiology, Branch Hospital, University of Tokyo, Tokyo

The blood flow rate of the liver is one of the indexes of the liver function, which is easily available from the decay curve of injected colloid in the circulating blood. Usually the half diminishing time ($T\frac{1}{2}$) of the decay curve is applied, and it is calculated indirectly from the deposit curve of ^{198}Au radiocolloid to the liver from the following
formula: $S(t) = 1\text{-}e^{-\lambda t}$
Where s(t): elrative activity from the liver at "t" Minutes after injection, λ: decay constant.
$T\frac{1}{2}$ is available as $\ln 2/\lambda$

This is the valuable test which is pursued simultaneously with hepatoscintigram. But it must be noticed that the analysis of this test shows many unknown factors, because the value of this test is easily differed by the condition of the subject, the drawing method of analyst, position of detector on the patients and so on.

Considering the errors from those factors, we analysed about 1000 case of $T\frac{1}{2}$ with hepatoscintigram. Most of the normal pattern hepatoscintigram cases, showed $T\frac{1}{2}$ within five