centage in the alcohol drinker. This trend was more marked in patients having the longer history of drinking in large amount.

The close relationship was demonstrated between the chronic alcoholic liver damage and left lobe atrophy.

Results

	Total No. of patient with liver irrhosis		alcoholic liver cirrhosis					
			group (I) No. of patient		group (II) No. of patient		(I) +(II) No. of patient	
l-swollen	38	53%	10	67%	7	30%	17	45%
l-atrophic	20	28%	4	27%	11	48%	15	40%
both atrophic	9	13%	1	6%	3	13%	4	11%
unclassified	5	6%	0	0%	2	9%	2	4%
Sum	72	100%	15	100%	23	100%	38	100%

Clinical Evaluation of I-BSP Scintigraphy on Biliary System

K. ISHIYAMA, Y. YOMAHARA
The Second National Hospital, Tokyo

Diagnostic value of preoperative ^{131}I-BSP scintigraphy was studied on the comparison of DIC and surgical findings for seventy one cases among patients operated upon biliary ductal lesions during past two years.

The configuration of extrahepatic biliary system was reasonably well demonstrated with the scintigrams as well as DIC. Furthermore, some pathological extent of biliary system and liver function might be presented by analytical studies of serial scintigrams which were taken every 200 seconds up to 120 minutes.

On the Hepatic Functions Test with ^{131}I-BSP after Loading BSP

H. SHIBATA, H. KURUSHIMA, T. SAKATA, S. OKAHASHI
Dept. of Radiology Osaka Medical Colledge
K. KANDA, T. SAITO
Dept. of Internal Medicine Minami-Osaka Hospital

BSP excretory tests and ^{131}I-BSP excretory tests have been employed so far generally for clinical hepatic diagnosis. However, considerable overlapping was seen in the results of ^{131}I-BSP test between normal subjects and in patients with hepatic disease as compared with the results of BSP

test, and was especially remarkable in the group of slight hepatic functional disturbances. Such being the case, after loading of non-radioactive BSP (3 mg/Kg) intravenously, ^{131}I-BSP hepatic function test was carried out, and usefulness of differential diagnosis between the group of slight hepatic disturbances and of normal subjects were discussed in comparison with transaminase.

Results.

1) Disappearance rate in blood of ^{131}I-BSP after loading BSP and transaminase were mutually related.
2) Judging from the disapperance rate in blood of ^{131}I-BSP after loading BSP, acute hepatitis and chronic hepatitis were separated from those slight hepatitis group of GOT 50 unit or thereabout.

Quantitative Analysis with Computer-aid I-131 Roes Bengal Hepatogram

A. MATUMOTO, K. NARABAYASHI
Dept. of Radiology, School of Medicine, Kobe University
T. MAEDA
Dept. of Radiology, Kyoto Prefectual School of Medicine
A. KAJITA
Dept. of Radiology, Center for Adult Diseases, Osaka

The hepato-biliary system under investigations, is usally a 'Black Box'. To clarify the structure of the system, the computational kinetic model was employed as an aid, and the quantitative anlysis of I-131 Rose Bengal hepatogram was performed in various liver diseases.

A total of 102 observations were made. Included were 15 chronic hepatitis, 5 acute hapatitis, 17 cirrhosis, 11 obstructive jaundice, 15 gall stones, 17 cholecystitis, 4 hepatoma, 10 miscellaneous liver diseases and 8 normal subjects.

Patients in the fasting state were examined in the supine position after receiving an intravenous injection of 300 μCi of I-131 Rose Bengal. Hepatic uptake and excretion of radioactivity were measured for 90 minutes using a Gamma camera. All data from the detector were recorded and stored on video-tape. During playback two regions of interest, one over the right lobe and the other one the gallbladder, were selected for this study.

On the other hand, I-131 Rose Bengal peripheral retention ratio was also measured using the conventional method (20/5 min.).

We have attempted to apply a 3 compartment analysis to I-131 Rose Bengal hepatogram, and the digital simulation program was written in Fortran IV (NEAC 2200–150), which was processed as follows: 1. Measured I-131 Rose Bengal hepatogram was printed out on line printer with curve pattern indicies, i.e. T (50%), T (Max), T (80%). 2. Assumed rate constants and relative volume indices were placed on punch cards. 3. Computer-aid simulated hepatograms were printed out on a line printer with curve pattern indicies. 4. Comparative study was performed between the measured hepatogram and the simulated hepatogram. 5. Finally, the blood flow indes, the hepatocellular function index and the intrahepatic biliary excretion index were obtained with the schematic presentation of the curves.