Experience with the use of ^{131}I BSP Kit

K. Ishiyama, Y. Yonahara, T. Takahara, M. Ishida, H. Kirimura and Y. Yamasaki
Second Tokyo National Hospital, Tokyo

BSP retention test using ^{131}I BSP kit was carried out in 50 patients scheduled to undergo laparotomy, 27 for hepato-biliary surgery including 6 with jaundice, 19 for esophageal or gastric surgery (1 with jaundice), 2 for rectal and 2 for splenic (1 with jaundice).

Blood samples were withdrawn at 10 and 30 minutes following injection of 1 ml. of ^{131}I BSP and cpm's were compared with the standard. In addition, in 20 patients a continuous scintigram was obtained by the use of a scinticamera of the hepatobiliary tract at 200 sec. interval.

Results: This technique proved to be free of side-effects and easily accepted by the patients with minimum discomfort. The test was found to be sufficiently sensitive in predicting operative findings of the biliary stasis. Untoward effects in jaundiced cases were not found.

In some patients thyroid scintigram simultaneously obtained revealed an uptake if the dye and this should be taken into consideration. It was found that while 20 microcurie was sufficient to carry out BSP retention test, more than 50 microcurie should be injected in order to obtain an adequate scintigram.

Studies on the Differential Diagnosis of Intrahepatic and Obstructive Jaundice by ^{198}Au-colloid Scintiscanning

K. Oi, M. Iuchi, M. Hayakawa and H. Mimura
Internal Medicine, Hospital of Kofu, Kofu
E. Adachi
Surgery, Hospital of Kofu, Kofu
K. Kiyosawa and K. Matsuda
Second Department of Internal Medicine, University of Shinshyu, Matsumoto

At the present stage, the diagnosis of obstructive jaundice is settled chiefly from the image of the scintigram by ^{131}I-BSP and ^{131}I-rose bengal. However, it is not easy to differentiate between intrahepatic and obstructive jaundice.

Now we studied sixty seven cases with the scintiscanning by ^{198}Au-colloid, twenty one are cholangitis, seventeen are obstructive jaundice, twenty four are acute hepatitis and five are subacute hepatitis, whose value of serum bilirubin are over five mg/dl.

The results are as follows; Cholangitis are, all cases, whose frontal square measure of the image are greater than the other, mean value is

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301 m^2, at the heal time they are decreased befor treatments. And the image of these cases are shown equally defects of dot, so called patchy pattern.

But cases of acute hepatitis are not shown the defects of dot, subacute hepatitis are shown the defects are not equally and the square measure is small value, cirrhosis are same, hepatoma are shown the solitary defect and metastatic carcinoma are shown multiple defects.

We here summerized the new result in the field of liver by ^{189}Au-colloid scintiscanning technique.

Hepatoscintigraphy using ^{99m}Tc-Sn colloid prepared by means of Electrolysis

M. Kaneko, I. Sasaki, M. Watanabe, A. Mishima, T. Tamiya and S. Kato
Department of Radiology, Nagoya University, School of Medicine, Nagoya
C. Yamamoto and T. Tomita
Radiological Technician's School affiliated to Nagoya University, School of Medicine, Nagoya

The apparatus for electrolysis was obtained from Dainabott R. I. Laboratory. 171 cases of various kind of liver disease such as hepatoma, metastatic liver cancer, liver cirrhosis and hepatitis were subjected to study, and 179 examinations were done in 7 months. In all cases, the examinations were successful in demonstrating liver and spleen for the evaluation of size, shape and the existance of filling defects. Bone marrow was also observed in some cases. Apart from such RES organs, the kidneys were observed on the scintiphotos on several examinations.

According to the chronological sequence of study, these examinations were devided into 5 groups. In cases of Group I, the kidneys appeared in 15 out of 23 cases; while in Group II 8 out of 39 cases, however, in none of 18 when we used counterelectrolysis after normal electrolysis; in Group III 7 out of 41; in Group IV 15 out of 34, including 7 instances of second use of the same vials, and in Group V only 1 out of 42.

Paper electrophoretic study indicated that the presence of the technetium compound having plus ion might play some role in the mechanism of renal uptake. This substance was cleared in the course of time, and also by the counterelectrolysis.

In conclusion, the preparation of technitium-Sn-colloid by this kind of electrolysis apparatus was found useful for the demonstration of RES organs, if each vial was used once only.

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