scan patterns are studied.

In 6 out of 7 patients with gallbladder carcinoma, scintigrams are in the pattern of "the right lower edge defect type". In 6 out of ten cases of the ampullary carcinoma and the cancer involving the cystic or distal common bile duct, scintigrams are in the pattern of "the central thin uptake type". In the cases of intrahepatic biliary duct carcinoma, the scintigrams are in the pattern of "the central thin uptake type" or "the central defect type". Above all, in all the cases of left intrahepatic biliary duct carcinoma, these are in the pattern of "the left defect type".

Generally, in various cases of the tumor of biliary tract, the enlargement of the liver and the scan pattern of "the central thin uptake type" or "the central defect type" are shown.

In the cases of obstructive jaundice, there are stenosing lesions at the various level of the biliary tract. Accordingly this accelerates the pressure back to the biliary tract. Enlargement of the liver and markked dilatation of the intrahepatic and common bile duct are resulted. Therefore, even if there is not any space occupying lesion in the liver, the scintigram display the scan pattern of "' the central thin uptake type" due to marked dilatation of the biliary tract. Especially, at the left lobe of the liver, the effect due to marked dilatation of the intrahepatic bile duct is resulted very easily. In the cases with gallbladder carcinoma, scintigrams show the scan pattern of "the right lower edge defect type". This scan dispplays that the gallbladder carcinoma invades the surrounding liver bed area.

Hepatoscintigram is very useful for the detection of the tumor of biliary tract, especially for detecting stenosed part of the biliary tract due to the carcinoma.

Postoperative Observations of a Case Receiving Lobestomy of Total Right Liver Lobe for Embryonal Hepatoblastoma by Liver Scintigrams.

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The subject is 8-year old girl with abdominal tumor as her principal complaint. History of the family was uneventful. She was delivered normally and no malformation could be detected. Present history: While swimming in the sea (August 7, 1966) she complained a severe pain in the right hypochondrium with fever of 38° C. On the following day fever subsided, but general malaise and dyspnea at walk continued, and visiting a certain hospital she was suspected of hepatic tumor and admitted to Department of Pediatrics, Okayama University. As the result of exhaustive examinations including the scintigrams, she was diagnosed as having hepatoma and transferred to Department of Surgery. On admission here, she was rather small in stature, somewhat undernurished, her face rather pale, but no anemia in blepharoconjunctiva and jaundice in adnata. Aside from slight systolic murmurs of the cardiac apex, no other abnormalities were found in the heart and lung. The lung-heart demarcation showed a rise in the fourth intercostal region, the liver palpable 4 fingers' breadth from the costal margin, its surface somewhat irregular and rough but no tenderness. The spleen not palpable, no enlargement of area of dullness, no ascites or edema. The examinations on admission revealed hypochromic anemia, leucocytosis, rise in the serum cholesterole and alkaline-phosphatase.

Preoperative roentgenograms showed a marked upheaval of the right diaphragm, and the liver scintigram disclosed a large lesion

in the right liver lobe, and due to the tumor adjacent normal tissues were froced downward and to the left. From these findings it was diagnosed as a primary hepatoma. On October 3, 1966 she received lobectomy of the total right lobe. Histologically it was proven to be hepatoblastoma.

In the postoperative period to the present we have been observing her course by taking the liver scintigrams four different times. The shape, size, position and the distribution of radiactivity are practically normal. The spleen appeared in view and on the second scintigram taken on November 11, it grew quite large, but later it somewhat shrunk itself. This phenomenon seems to be related the injury to the portal circulation caused by the blocking of blood circulation as the result of right lobectomy. In addition, despite the transfer of the left lobe under the right diaphragm after the resection, later scintigrams revealed quite normal liver pattern. In the postoperative examinations of the liver function the activity of alkalinephosphatase remains quite high, but others are normal. The patient at present is healthy without any subjective symptoms.

Celiac Perfusion Scanning in Portal Hypertension by the Use of ^{131}I MAA Comparative Study of Liver Cirrhosis and Idiopathic Portal Hypertension

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Celiac perfusion scanning was performed in 3 control cases, 7 cases with liver cirrhosis and 8 cases with idiopathic portal hypertension (non-cirrhotic, splenomegalic portal hpertension with patent portal tract) in order to examine the blood flow partition to the liver and apleen, following the introduction of the 300μCi of ^{131}I MAA into the celiac artery through selective celiac arterial cathetarization.

In liver cirrhosis the hepatic accumulation of MAA was far dominant over spleen, compared with control cases, indicating the dominant perfusion to the liver. By contrast, in all cases with IPH, most of the radioactivity accumulated in the spleen and the hepatic accumulation was poor, even compared with control cases, which indicated the most of the celiac flow perfused the spleen. Thus in celiac circulation, remarkable contrast was demonstrated between liver cirrhosis (hepatic arterial dominant perfusion) and IPH (splenic arterial dominant).

In the shunt scintigram by splenic injection of MAA (Ref 1) authors reported considerable amount of the splenic flow perfused the liver in IPH in spite of the development of extrahepatic shunts.

These results indicated the increased splenic flow in IPH (No. 82) causes the arterial blood steal from the hepatic artery and the portal "over loading" through the spleen, producing the portal flow dominant liver perfusion in this disorder, which is the contrasting finding in liver cirrhosis whose liver perfusion is well known to be hepatic arterial dominant type.

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