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COLLOID-HEPATOGRAM WITH PHYTATE-Tc-99m.
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phytate-Tc-99m, which is one of the most popular radiopharmaceuticals for liver scintigraphy, is thought to be arrested in R.E.S., especially in the liver by Kupffer cells. Liver uptake index(KI) of phytate demonstrated dose dependance, so it reflects not only liver bloodflow but also Kupffer cell function. KI in various hepatobiliary diseases are 0.183 ± 0.026 in liver cirrhosis, 0.221 ± 0.033 in hepatoma without cirrhosis, 0.269 ± 0.040 in biliary neoplasms and 0.249 ± 0.015 in miscellaneous benign biliary diseases. KI showed significant correlation with ICG-K0.5, ICG-Rmax, ($p < 0.05$), ChE, ZTT($p < 0.01$) and Fibrinogen($p < 0.005$), respectively. The fate of phytate phagocytosed by Kupffer cells is still unclear. In our three cases, RI-activity was detected in Ttube-drainaged bile early in the post-injection period and reached its maximum value as early as in one hour.

After operations(most of them are partial hepatectomy), colloidal uptake of spleen (S/S+L) increased and KI decreased suggesting that effective liver bloodflow decreases and compensation or congestion of spleen results, though we could not differentiate them from each other.

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CLINICAL EVALUATION OF PROGRESS OF DIFFUSE HEPATIC DISEASES BY LIVER SCINTIGRAPHY USING TC-99M-SULFUR COLLOID - CORRELATION BETWEEN ITS INTER-ORGAN UPTAKE RATIO AND BIOPSY FINDINGS.T.Kimura,A.Suzuki,Y.Sakata, M.Ookawa and Y.Komatsu. Fisrt Department of Internal Medicine,Hirosaki University School of Medicine, Hirosaki.

Correlation between scintigraphic inter-organ uptake ratio and biopsy findings was studied in 34 cases with diffuse hepatic diseases, including 8 cases of nonspecific reactive hepatitis(NSRH), 8 cases of chronic inactive hepatitis(CIH), 12 cases of chronic active hepatitis(CAH) and 6 cases of liver cirrhosis(LC). Using a computer-interfaced scintillation camera, regions of interest corresponding to liver(L), spleen(S), bone marrow(BM) and back grounds(BG) were selected, and the ratios were computed among each other. Biopsy findings of piecemeal necrosis(PN), necrosis(N), portal fibrosis(PF) and Kupffer cell mobilization(K) were divided into five grades respectively. In CAH, significant correlation was showed between PF and L/S, N and S/BG, and N and L/S(Spearman rank correlation coefficient). Additionally, BM/BG and L/BM showed significant difference between LC and non-LC. With ranking the four disease category from 1 to 4 in order of NSRH, CIH, CAH and LC, significant correlation was present between this ranking and L/BM. Conclusively, it was suggested that liver scintigraphy is beneficial to evaluating progress of diffuse hepatic diseases.

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COMPARISON OF COLLOID LIVER SCAN, COMPUTED TOMOGRAPHY AND GRAY-SCALE ULTRASONOGRAPHY IN THE EVALUATION OF THE DIFFUSE LIVER DISEASE PROVEN BY THE PERITONEOSCOPIC BIOPSY.

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Seventy cases of the diffuse liver diseases(cirrhosis, 26; pre-cirrhosis, 5; active chronic hepatitis, 12; inactive chronic hepatitis, 5; acute hepatitis, 5; fulminant hepatitis, 6; biliary stasis, 5; fatty metamorphosis, 4; others, 2) proven by the peritoneoscopic biopsy were studied with three modalities such as colloid liver scan, X-CT and gray-scale ultrasonography.

On the colloid liver scan, the size of the liver and spleen, the liver and spleen size ratio, the RI distribution of the liver, spleen and bone marrow were evaluated. On X-CT, the size, surface and the CT number of the liver and spleen, the liver and spleen size ratio, the diameter of the portal vein were evaluated. On gray-scale ultrasonography, liver deformity, edge, surface, intrahepatic echo, splenomegaly were graded.

We reported the role, characteristic and weak point of the three modalities for diagnosis of the diffuse liver diseases.

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POSITIVE DELINIATION OF HEPATOCELLULAR CARCINOMA(HCC) WITH I-131-LABELLED LIPIODOL ADMINISTERED THROUGH HEPATIC ARTERY.

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Subjects were comprized 4 cases of resected HCC and one case of multinodular HCC after autopsy. Nodular HCC showed positive image by scintiphoto and round high density mass lesion by CT. Softex Xray film photograph showed fine mass lesion and small spot on hepatoma section.

In histologic section of HCC, lipiodol deposited not only in space of sinusoid, but also in extracapsular infiltration of HCC. Lipiodol was found as dead space by HE stain and red deposit by Sudam III stain.

Smallest daughter nodules detected by lipiodol was 3 mm in diameter by liver specimen. In HCC in scirrhou type, there was not any deposit of lipiodol in histological section.

In tumor bearing tissue, lipiodol droplet were surrounded by giant histiocytes and phagocytic cells.