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SCINTIGRAPHIC FINDINGS OF FOCAL FATTY INFILTRATION IN LIVER. M.Kudo,M.Hirasa,Y.Ibuki, K.Fujimi,S.Ueda,S.Tomita,H.Komori,A.Todo, Y.Kitaura,H.Tochio,Y.Saiki,H.Yamaguchi, H.Ito and K.Ikekubo. Kobe General Hospital. Kobe.

Thirty two patients with histologically proven fatty infiltration of the liver were evaluated with liver scintigram. Twenty three had fatty liver (FL), 5 alcholic hepatitis (AH) and 4 alcholic cirrhosis. No characteristic liver scintigram was found in FL. Enlarged liver, heterogeneous and reduced hepatic activity were observed in all cases with AH. Six cases out of 32 were diagnosed to be focal fatty infiltration (FFI) with ultrasound or Xray CT. Liver scintigram and single photon emission computed tomography demonstrated the fatty infiltrated area in 6 cases to be as follows. The fatty infiltrated area was visualized as hot spot in 1 case with AC, defect in 2 cases with FL and AH, low uptake in 1 case with AH and iso-uptake in 2 cases with FL.
Scintigraphic findings in these patients suggest that the radioactivity in FFI reflects the number and function of Kupffer' cell at fatty infiltration of the liver.

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COMPARISION OF SCINTIGRAPHY AND PERITONEOSCOPIC STUDY. S.Shiomi,S.Harihara,T.Kuroki, T.Monna and S.Yamamoto. The 3rd Department of Internal Medicine, Osaka City University Medical School. H.Ochi and Y.Onoyama. Department of Radiology, Osaka City University Medical School. Osaka.

Both peritoneoscopic study and liver scintigraphy were performed in 682 patients from June 1969 to July 1982 in our hospital.

On the liver scan, focal areas of low or no radioactivity were found in 288 out of 682 cases. In 288 cases, the number of such regions were 343. The regions were (1)gall bladder fossa(102); (2)porta hepatis(80); (3)others(161).

Five of 102(5%) were proved to have space occupying masses at the gall bladder fossa.

In the porta hepatis regions upon peritoneoscopic study there proved to be no space occupying masses. Seventy-seven of 161(48%) were proved to have space occupying masses at other regions.

In the remaining regions(84), no space occupying masses were found. But 42 out of 84 regions were found in the cirrhotic liver , so the false-positive rate were 12%(42/343).

In the false -positive cases, the changes on the liver with peritoneoscopy were found in 25 out of 42 regions(60%). The changes on the liver peritoneoscopy were adhesion, atrophy and deformity of the liver.

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THE SIGNIFICANCE OF TIME-LAPSE CHANGES IN GA-67-CITRATE ACCUMULATION IN DIAGNOSIS OF HEPATOMA. T.Ashizawa, K. Kondo, Y. Ariyoshi and C. Kido, Aichi Cancer Center, Nagoya.

The time-lapse changes in Ga-67-citrate accumulation was compared in 86 cases of normal (40) and diseased livers (46, including 19 hepatoma) by liver scintigra -phy performed 6, 24, 30, 54 and 78 hours after intravenous injection of 3mCi Ga-67-citrate. Radioactivity counts for routine anterior and posterior scans were obtained each time. Setting the 6-hr average pixel value at 100, the remaining hour values were revised accordingly and a time relation curve was established.
Three curve patterns were predominant: Type I-decreasing, Type II-flatly decreasing, and Type III-increasing, then decreasing. Type I and II were recognized in 37 normal cases and 32 cases of liver disease (including 5 hepatoma). Type III was seen only in hepatoma cases (14) and normal cases (3), showing a definite correlation between hepatoma and Type III curve pattern. Assuming Types I and II to be negative and Type III to be positive, a decision matrix was made for hepatoma. Looking at the diagnostic rate, sensitivity was found to be 73.7%, specificity 92.5%, positive predictive value 82.4%, and negative predictive value 88.1%. This examination method is thought to have great significance for qualitative diagnosis.

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CLINICAL EVALUATION OF Tc-99m-PMT IN DIAGNOSIS OF HEPATOMA. Y.Hasegawa, S.Nakano, A.Noguchi, T.Hashizume, K.Ibuka, Y.Sasaki, M.Imaoka, J.Kozima, S.Ishigami. The Center Adult Diseases Osaka. Osaka.

We studied the availability of a new hepatobiliary imaging agent, Tc-99m-PMT, for diagnosis of hepatoma. Most of Tc-99m-PMT taken up by nomal liver is excreted into intestinal canal through bile duct within several hours, whereas hepatoma has no bile duct through which Tc-99m-PMT can be excreted. Accordingly, we thought that the lesion of hepatoma might be positively seen on the delayed Tc-99m-PMT scan, even if less Tc-99m-PMT was taken up by hepatoma than nomal liver. In 35 cases of hepatoma the liver was scanned at 5 min, 1 and 5 hr after injection of Tc-99m-PMT (5-15 mCi) and the images were compared with those of colloid scan. The degree of Tc-99m-PMT uptake in the lesions was classified into 3 groups as follows; increased, equilibrated and decreased uptake as compared with the surrounding area. The delayed scan obtained at 5 hr after injection showed increased uptake 16, equilibrated 9 and decreased 10. The delayed scan was found to be useful to evaluate the degree of Tc-99m-PMT uptake by hepatoma, suggesting that Tc-99m-PMT scan can be expected as a useful diagnostic method for detection of hepatoma.