

from 3 projections using gamma camera. CT images were obtained using ACTA 0-100 and to enhance the contrast, all cases but one had rapid intravenous injection of 65% meglumine diatrizoate (100 ml).

In primary liver cancers, detectability by radionuclide imaging (89–100%) was much higher than that by CT (50–60%). As with this result, we think of some factors as follows: information obtained by our available CT is sometimes limited by motion artifacts and the initial positive enhancement of the contrast material can not be expected because of its long scan time. We guess also further factors as follows: the attenuation value of the tumor tissue may be equal to that of the surrounding liver tissue and the prolonged positive enhance-

ment of the contrast material may not be expected because of even opacification through the whole body. From our experience it seems that the detection of primary liver cancers excluding cholangioma by CT may be much due to the necrotic change within the tumor. Therefore, it can be said that radionuclide imaging still remains useful in screening out the primary liver cancers.

In secondary liver cancers and cystic liver diseases, small mass lesions which failed to be detected by radionuclide imaging, were clearly delineated by CT. CT is useful for the detection of these kinds of mass lesions.

In addition, CT is of much help to exactly localize mass lesions in the liver for the purpose of the surgical procedure.

Comparison between CT and Radionuclide Imaging on Abdominal Lesions

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We made a comparative study of X-ray computed tomography (CT) and liver scintigraphy on the detectability of 82 cases of hepatic lesions and the determination of their extension.

Our 82 patients were consisted of 12 cases of hepatoma, 6 of metastatic liver tumor, 7 of hepatic cyst, 9 of other hepatic tumor, 5 of liver cirrhosis and 45 of other lesions.

CT was superior to radionuclide imaging in 20 cases in detecting hepatic lesions (hepatoma 2, metastatic liver tumor 2, hepatic cyst 3 and other lesions 13). In 4 cases of them, the lesion couldn't be detected by radionuclide imaging. In 16 cases with the detected lesion, it was difficult to determine whether their lesions were intrahepatic or extrahepatic.

Radionuclide imaging was superior to CT in

2 cases of hepatoma. Both cases could be detected, but couldn't be determined their extension by CT.

On the whole, CT was superior over radionuclide imaging on the detectability of localized hepatic lesions and the determination of their extension. However, the radiation dose of CT is far more than that of radionuclide imaging, and no information about hepatic function can be obtained by CT.

From this comparative study, we conclude that these two examination should be complementary and one cannot completely be substituted for another. So, we have to exactly know the difference between the two methods and make most of each specific merits for the diagnosis of hepatic lesions properly.