

scanning was started 30 minutes after intravenous administration of ^{198}Au (colloidal gold) in doses of $3.0\ \mu\text{Ci}$ per kilogram of body weight. Normal subjects in this study were 28 males and 22 females between the age of 20 and 70 who were operated with diagnosis of gastritis, peptic ulcer and gastric polyp. Normal range of scintigram was settled on the subjects who had no pathological findings of liver on liver function (including total serum protein, A/G ratio, icteric index, alkaline phosphatase, Z.T.T., T.T.T., SGOT, SGPT and B.S.P. test), gross anatomically and microscopic anatomically.

Variation in Normal ^{198}Au Liverscintigram

Normal configuration of ^{198}Au liverscintigram was classified into 5 types. A. Standard

type, 56% of this series had the typical triangular configuration which were seen mostly in males of standard build. B. Left lobe hypertrophic type was 22% of all, and mainly short and fatty females belonged to this type. C. Right lobe hypertrophic type was encountered 8% of all in normal build. D. Left lobe atrophic type (8%) was seen mainly in short and thin females. E. Right lobe atrophic type (6%) was seen in short and thin males.

Conclusion

In this study the configuration of normal ^{198}Au liverscintigram was classified into 5 types and closely connection was demonstrated between sex and body build.

Differentiation of Hepatoma by the Use of ^{75}Se -Selenomethionine for the Liver Scintiscanning

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The detection of cancer in the liver by scintiscanning method depends on the cold uptake using radioactive colloid or ^{131}I -Rose Bengal. But this method helps us little to differentiate hepatoma from the metastatic cancer in the liver.

^{75}Se -Selenomethionine is usually used for pancreatic scanning. But this substance accumulate abundantly in the liver and high ^{75}Se activity is observed much longer than in the pancreas. If this affinity may remain also in the hepatic cells which have become malignant, it would be possible to differentiate hepatoma from the other space occupying lesion by comparison of liver scintigram with ^{75}Se -Selenomethionine and that with radioactive colloid or ^{131}I -Rose Bengal. Under this consideration we used ^{75}Se -Selenomethionine in four patients with hepatoma and several patients with metastatic cancer of stomach and with cholangioma. Among the four pa-

tients with hepatoma, three was associated with cirrhosis of the liver.

In all cases of hepatoma remarkable hot areas were observed in the liver scintigrams with ^{75}Se -Selenomethionine in contrast to the cold area with ^{198}Au colloid and $^{99\text{m}}\text{Tc}$ colloid. These sites were confirmed histologically as hepatoma by laparotomy and necropsy. In one cases hepatoma seemed to have more enhanced uptake than the non malignant liver cells. In another cases the central area had more poor activity suggesting central necrosis. On the contrary, in the cases of liver metastasis, sites of cold uptake of radioactive colloid were remained also to be cold by the use of ^{75}Se -Selenomethionine.

By the above results the use of ^{75}Se -Selenomethionine for liver scintiscanning is thought to be valuable for the diagnosis of hepatoma.