

Deposit of Radiocolloids in Various Condition

Y. TAKAHASHI, T. YOKOTA, H. SHIMURA, T. HISHIDA and M. KIGA

Department of Radiology, Showa University School of Medicine

Unusual deposit of $^{99m}\text{Tc-Sn}$ -colloid in lungs is occasionally encountered, while ^{99m}Tc -phytate and ^{198}Au -colloid are not taken up in lungs. It was experimentally confirmed that the size of colloids was positively correlated with the lung/liver ratio and also the spleen/liver ratio. Colloids larger in size were not, however, deposited in lungs to the degree in which lungs were visualized in scintigrams.

Some physiological abnormality of patients is likely to cause unusual deposit of colloids in lungs when we consider the fact that lungs of patients were not always visualized by $^{99m}\text{Tc-Sn}$ -colloid which was simultaneously prepared.

In seven cases among 112 cases of liver scintigraphy with $^{99m}\text{Tc-Sn}$ -colloid, abnormal deposit of the radiocolloid in lungs were observed. Out of seven cases, four cases were cirrhosis of liver

and two cases were hepatitis, all of which were in a sense identical to some abnormal physiologic conditions.

In an animal experiment, the lung/liver ratio increased when the reticuloendothelial system was stimulated by endotoxin. In this condition the larger the size of colloids, the larger the lung/liver ratio.

In some other condition such as hepatic injury by oral administration of CCl_4 , significant increase of deposit of colloids in lungs was not observed. Excluding the factor of colloid size, the causes of unusual deposit of $^{99m}\text{Tc-Sn}$ -colloid may be as follows;

1. Increased phagocytic activity in lungs that is induced by RES activator such as endotoxin.
2. Decreased accumulation in the diseased liver.
3. Ionic changes of $^{99m}\text{Tc-Sn}$ -colloid in blood.

Liver Scintigraphy of the Esophageal Cancer

Kimiichi UNO, Yuko MURAKAMI, Yoko MASUNAGA, Katsumi YAGUCHI,

Hiroshi YASUKOCHI

Department of Radiology, Koshigaya City Hospital, Saitama

Metastases of the esophageal cancer to liver has been reported in about 30% of the autopsy cases in Japan.

We have had 9 cases for about one and a half year. 3 cases have metastases to liver. Of these patients, 2 of them are dead and the other is alive.

The liver scintigraphy has been performed in all cases by using Pho-Gamma LFOV scinticamera and ^{99m}Tc -phytate 10 mCi being injected intravenously. And coeliac angiography has been performed simultaneously.

The examination on admission shows metastases to liver in 1 case. 3 cases are doubtful on metas-

tases. 5 cases show no metastases.

2 patients had surgical operation: one showed no metastases in scintigraphy and had a partial resection with esophagogastrostomy. The other was doubtful in liver scintigraphy and had only exploratory laparotomy, because he had metastases in liver.

8 cases were treated with 10 MeV X-ray (Linac) radiotherapy and chemotherapy.

The liver scintigraphy is a useful tool for detection of metastases in liver, and for monitoring of response to therapy. We here report a few interesting cases in 9 cases.