

Early Scan and Delayed Scan with ^{67}Ga Citrate in the Differential Diagnosis of Hepatic Mass Lesions

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A comparative study of ^{67}Ga citrate, early scan (blood pool scan) at 5-minutes and delayed scan (tumor scan) at 48-hours later from intravenous injection of 35-microcuries per kg of ^{67}Ga citrate, was performed in 93 patients with focal defects on $^{99\text{m}}\text{Tc}$ phytate liver scan. In 50 of 93 patients, the final histologic diagnosis of the lesions was obtained by closed biopsy, surgery, or autopsy. There were 21 patients with metastatic tumor, 10 with primary hepatoma, 8 with liver cirrhosis, 5 with cyst, 3 with abscess, 2 with hemangioma, and 1 with radiation hepatitis.

The amount of ^{67}Ga activity in the lesions was graded as follows: in early scan, (1) avascular or relatively hypovascular, (2) vascularity approaching or equal to that of normal liver, and (3) more

vascular than normal liver; in delayed scan, (—) no uptake, (+) uptake less than normal liver, and (++) uptake greater than or equal to normal liver.

Seven of 10 primary hepatomas were classified into (2)-(++), while 11 of 21 metastatic tumors were classified into (1)-(+). All of 8 liver cirrhosis and 5 cysts were classified into (1)-(—). All of 3 intrahepatic abscess and of 2 hemangiomas were classified into (1)-(++) and (3)-(—) respectively. These results are summarized Table 1.

Differential diagnostic accuracy of hepatic mass lesions was improved by a comparative study of ^{67}Ga citrate scan. This study is very simple and useful as initial screening test.

Table 1. Results of early and delayed scan with ^{67}Ga citrate

	No. of Cases	Early scan			Delayed scan		
		3	2	1	++	+	—
Metastases	21		1	20	5	11	5
Hepatoma	10		7	3	9	1	
Liver cirrhosis	8			8			8
Cyst	5			5			5
Abscess	3			3	3		
Hemangioma	2	2					2
Radiation hepatitis	1			1			1
Total	50						

Liver Scintigraphy in Patients with Malignant Lymphoma

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Fifty patients with malignant lymphoma were studied, (Hodgkins disease: 12 patients, reticulo-sarcoma: 26 patients, lymphosarcoma: 12 patients.)

Out of those patients, liver enlargement in 37 patients, increased spleen uptake of radioisotope in 40 patients, focal filling defect in 13 patients were observed on scintigraphy.

Autopsy in 25 patients including 13 patients noted focal filling defect on scintigraphy were performed. In 17 patients of 18 patients with both right and left lobe enlargement of the liver including 12 patients with focal filling defect no scintigraphy, liver infiltration was positive. In 14 patients of 18 patients with increased spleen