

Clinical Evaluation of ^{67}Ga -Citrate as a Tumor Scanning Agent

G. UCHIYAMA, T. SAEGUSA, H. KAKEHI, N. ARIMIZU and N. YUI

Department of Radiology, Chiba University School of Medicine, Chiba

The clinical usefulness of ^{67}Ga -citrate as a tumor scanning agent was evaluated from the experiences of more than 50 cases, and the problems on what sorts of tumors and in what ways the agent should be applied were discussed. The twin-headed 5-inch Hitachi whole body scanner was used for the scanning. The whole bodies of the patients scanned 3 to 4 days after the i.v. administration of 2 mCi of ^{67}Ga -citrate. The scans were recorded in 1/5 of the real size. When the localized high concentrations of the radioactivities were found, the real-sized scans were performed over such areas. The ^{67}Ga -citrate tumor scans were then compared with the physical examinations and x-rays. The cases scanned include the carcinomas of the lung, carcinomas of the thyroid, benign adenomas of the thyroid, carcinomas of the cervix

uteri, malignant lymphomas, malignant choriocarcinoma, rhabdomyosarcoma etc. The mechanism of concentration remains unknown. From the clinical point of view, however, it is likely that the malignant neoplasms well concentrate while the benign neoplasms or infections do not or less.

While the high concentrations were obtained in almost of all cases of the malignant lymphomas, no concentration in the malignant tumors (such as the carcinomas of the thyroid) or good concentrations in benign pathology (such as the lymphadenitis colli tuberculosa) were also observed.

As the conclusion, ^{67}Ga -citrate was clinically useful in cases of which scans told us the extent of invasions or the existence of distant metastases of malignant neoplasms.

Diagnostic Aspect of Malignant Tumor with ^{67}Ga -Citrate

T. HIGASHI and K. ITO

Department of Radiology

Y. NAKAYAMA

Department of Biochemistry

T. HISADA

Department of Pathology

S. SUZUKI, H. KATO and I. TANADA

Yokohama Keiyu Hospital

Kanagawa Dental College, Kanagawa

Clinical survey using ^{67}Ga -citrate was performed in 170 patients with a variety of malignant and benign neoplasms, and inflammatory lesions of lung, breast, maxillary sinus, stomach, colon, pancreas and liver.

Especially, ^{67}Ga -citrate was valuable to establish the diagnosis of cancer of lung, breast and maxilla. However, it was rather difficult, at present, to obtain positive scintigram in the case of cancer of stomach, pancreas and