

Clinical Evaluation of ⁶⁷Ga-Citrate Scintigraphy in Sarcoidosis

Chikashi NAKAYAMA*, Yoshihiko OSHIUMI*, Kazunori MORITA*, Issei KOGA*,
Itsuma KAMOI*, Masanori MATSUI*, Keiichi MATSUURA* and Katsushi WATANABE**

*Department of Radiology, Kyushu University, **Department of Radiology,
Miyazaki Medical College

⁶⁷Ga-citrate scintigraphies were performed on 22 patients with sarcoidosis; 16 were proved to be by scalene node or lung biopsies and 6 were diagnosed by Kveim test or the clinical criterias.

Radiographic findings of the chest were classified into following four types; Hilar type, Hilar and parenchymal type, Parenchymal type, and Normal type.

Scintigrams were then compared with radiographs or physical examinations.

Scintigrams of 13 cases which belonged to hilar type and 4 of 5 hilar and parenchymal types

showed positive images.

On the other hand, only 1 out of 3 parenchymal type showed positive image.

In parenchymal lesions, only the lesions which have nodular components revealed positive image. By this fact, ⁶⁷Ga-citrate did not seem to accumulate on the fibrous lesions.

⁶⁷Ga-citrate scintigraphies could also detect abnormalities easily in the extrathoracic lesions, such as in the orbital region, head and neck, and the abdomen, even if these were not found out in other diagnostic methods.

Gallium 67 Scanning in The Evaluation of Therapy of Malignant Tumors

Tomomitu HIGASHI*, Masanori KANNO*, Taro HISADA*, Ko NAKAMURA**,
Sakae SAKURAI**, Hideo KATO**, and Sinichi SUZUKI***

*Kanagawa Dental College, **Yokohama Keiyu Hospital, ***Kawasaki Ida Hospital

It has been reported that the accumulation of Gallium 67 in a tumor is diminished following effective irradiation or chemotherapy. However, the full significance and implications are not clear. To further pursue this issue, we used Gallium 67 scanning in attempt to answer two questions: (1) Is Gallium 67 scintigraphy useful in determining the susceptibility of malignant tumor cells to irradiation or chemotherapy? (2) Is Gallium 67 scanning useful following therapy to evaluate the efficacy of that therapy?

MATERIALS

Gallium 67 scintigraphy was performed on 25 patients with a variety of malignant tumors of the head and neck. The 25 patients comprised a variety of malignant tumors in the regions of the maxillary sinuses, cervical lymph nodes, tonsils, tongue, pharynx, salivary gland, and thyroid gland. Gallium 67 scans were made in all patients before

treatment, and within 1 or 2 weeks following completion of treatment under the same conditions.

RESULTS

Following treatment, all Gallium 67 scintigrams except 1 demonstrated reduced Gallium 67 accumulation, and most became negative or only equivocally positive. These findings were irrespective of the tumor site or histological type. Gallium 67 accumulated most densely in malignant lymphoma, anaplastic carcinoma, squamous cell carcinoma, and malignant melanoma. Of these, all except malignant melanoma revealed a high sensitivity to radiation or chemotherapy. Scans in patients with adenocarcinoma and adenocystic carcinoma showed less Gallium 67 accumulation, and were only weakly positive prior to treatment. If certain limitations are borne in mind, Gallium scanning may prove a valuable tool in planning and evaluation of therapy of malignant tumors.