

Gallium-67 citrate scintigraphy in the pre-operative evaluation of soft tissue tumors of the extremities

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We conducted a study of 90 patients with soft tissue tumor in their arms or legs, in order to determine the usefulness of scintigraphy with gallium-67 citrate as a diagnostic means. All patients had adequate scan images, and tumor tissues had been histologically confirmed by surgical resection.

The subjects consisted of 19 patients with malignant tumors, 55 patients with benign tumors, and 16 patients with other disorders in which soft tissue tumor-like lesions occurred.

When the activity of the tumor was more than the activity of the normal region of the contralateral extremity, it was estimated to be positive.

The positive rate was found in 78% (15/19) of patients with malignant tumors, in 25% (14/55) of patients with benign tumors and in 31% (5/16) of patients with other disorders. Classified by diseases, high positive rates were observed in liposarcoma, leiomyosarcoma, malignant lymphoma, neurinoma, extra-abdominal desmoid and sarcoidosis.

Out of 7 patients in which the activity of the tumor was equal to, or higher than that of the liver, 6 patients had malignant tumors and one patient was diagnosed as having an abscess.

It seemed possible to distinguish between liposarcoma and lipoma by means of a gallium-67 scan.

Furthermore, the gallium-67 scan was useful in detecting lesions of sarcoidosis as well as in evaluating the response to treatment.

Key words: gallium-67 scan, soft tissue tumors, extremities