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GALLIUM-67 SCINTIGRAPHY OF LEIOMYOSARCOMA IN ALIMENTARY TRACT.

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The Gallium-67 scintigraphy was performed in 6 cases with leiomyosarcoma in the GI tract (stomach 1, duodenum 2, jejunum 1, ileum 1, sigmoid colon 1). All of 6 tumors were demonstrated as high accumulation of Ga-67 on scintigrams. Particularly, in 2 of 6 tumors, the Ga-67 accumulated in the tumor itself in spite of no inflammatory change caused by fistula formation or ulcer formation. In one case occurred recurrence after surgery, the Ga-67 accumulated in the site of recurrence and metastases to the intraperitoneum. It was supposed that the Ga-67 have an affinity for the leiomyosarcoma. Therefore, the Ga-67 scintigraphy seems to be useful method to differentiate malignant from benign leiomyogenic tumor and to survey the recurrent tumor and metastasis after surgery.

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Ga-67 SCINTIGRAPHY IN SOFT TISSUE SARCOMA. S.Nakano, Y.Hasegawa, K.Ibuka, T.Hashizume, A.Noguchi, Y.Komatubara, and H.Hayashi. The Center for Adult Diseases, Osaka.

Soft tissue sarcoma is a relatively uncommon disease and the reported positive rate of Ga-67 scan varied with authors. We studied the usefulness of Ga-67 scan in soft tissue sarcomas. 29 patients with soft tissue sarcomas were studied. Of 29, 13 were scanned before operation and 16 during their recurrence. Tumors were detected by Ga-67 scan in 22/29 patients (10/11 malignant fibrous histiocytomas, 5/6 leiomyosarcomas, 2/6 liposarcomas, 3/3 malignant schwannomas, 1/1 alveolar soft part sarcomas, 1/1 fibrosarcomas and 0/1 rhabdomyosarcomas). When the results of the scans were evaluated in positive rate of different anatomic sites, the rate was 25/34 sites (12/14, 5/7, 2/6, 3/3, 2/2, 1/1 and 0/1, the order was the same as above), and was higher in the lesions of extremities and trunk (13/14) than those in thoracic, abdominal and pelvic cavities (12/20). Of 9 false negative lesions, 8 was greater than 7 cm and one was 1 cm in diameter. Angiographies performed in 5 false negative tumors showed 4 hypovascular and 1 hypervascular lesions. No scan obtained from 9 patients without recurrence after surgery and 22 patients with benign soft tissue tumors showed abnormal accumulation. Ga-67 scans were sensitive in patients with malignant schwannoma malignant fibrous histiocytoma and leiomyosarcoma.

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GALLIUM SCINTIGRAPHY IN PATIENTS WITH ADULT T-CELL LYMPHOMA-LEUKEMIA. H.Hoshi, S.Jinnouchi, K.Harada, H.Ebihara, S.Futami and K.Watanabe. Department of Radiology, Miyazaki Medical College. Miyazaki.

Gallium scintigraphy was evaluated in 25 patients with Adult T-cell Lymphoma-Leukemia (ATLL). Gamma cameras used were LFOV (Searle Radiographics), MaxiCamera 400T (G.E.) and OMEGA 500 (Technikare). Anterior and posterior spot images were obtained in the head, chest, abdomen and pelvis at 72 hours after administration of 3 mCi of gallium citrate. Abnormal high accumulations were observed in 17 cases out of 25 (superficial lymphnode;4, mediastinal lymphnode;7, paraaortic lymphnode;2, lung;9, liver;1, bone;1). There were 10 pathologic lesions first detected by gallium scintigraphy in 9 cases out of 17 (superficial lymphnode;1, mediastinal lymphnode;6, paraaortic lymphnode;1, lung;0, liver;1, bone;1). White blood cell counts (WBC) and serum LDH levels were relatively high in patients with abnormal high accumulation in lymphnodes or organs, although they were almost normal in patients without abnormal accumulation in gallium scintigraphy. High serum calcium levels were observed in only 2 cases out of 25. In conclusion gallium scintigraphy seemed to be a useful examination to detect malignant lesions in the patients with ATLL.

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A STUDY ON MARKEDLY INCREASED BONE MARROW UPTAKE ON GA-67 SCAN. K.Ikekubo, M.Hino, K.Nasu, S.Jeong, H.Yamaguchi, Y.Saiki and H.Ito. Kobe General Hospital, Kobe. M.Senda, Kyoto University School of Medicine, Kyoto.

The purpose of the present study was to clarify the cause of increased Ga-67 bone marrow uptake in adult patients.

The Ga-67 imaging was performed 72 hours after i.v. injection of 2 mCi of Ga-67 citrate. The scintigrams and blood chemical examinations were reviewed retrospectively in 803 adult patients who had undergone Ga-67 imaging. Of the patients, 405 had no abnormal focal accumulation of the tracer (negative scan group) and the remaining 398 had abnormal lesions (positive scan group). The intensity of bone marrow activity was classified into three types: I) 532 (66.3%) was normal (I), 2) 233 (29%) showed increased activity in vertebrae and pelvis (II), 3) 38 (4.7%, M; 20, F; 18) had markedly increased uptake in vertebrae, pelvis and long bones (III); 26 of these had malignant diseases. There are no significant difference in the percentage of (II) and (III) between negative and positive scan group. In negative scan group, patients with (III) showed significantly lower values of RBC, Hb, Ht, MCH, MCHC, A/G and higher CRP values compared to the patients with (I) ($P < 0.02-0.001$).

In conclusion, the patients who had extremely increased Ga-67 bone marrow uptake had severe hypochromic anemia, low A/G and high CRP values.