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Ga-67 SCINTIGRAPHY IN HEMATOLOGICAL DISORDERS.

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Value of Ga-67 scintigraphy was evaluated on 41 cases of various hematological disorders including leukemia, myelofibrosis, and multiple myeloma. Abnormal uptake to spinal and/or pelvic region (red-marrow) was observed in 13 cases. Localized abnormal uptake of other region was present in 33 cases, which included periarticular areas, liver, spleen and kidney. These abnormal uptakes were correlated with the infiltration by the tumor cells on bone marrow aspiration or biopsy and other examination in most cases. Comparison with bone scintigraphy and bone marrow scintigraphy showed some discordant cases. Since positive findings on Ga-67 scintigraphy are difficult to interpret without other definitive substantiating examination, we conclude that the incations of this examination are quite limited in hematological disorders.

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A STUDY OF LYMPHATIC FLOW IN POST-MASTECTOMY PATIENTS WITH BREAST CANCER.

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This study was undertaken to examine the lymphatic flow of the upper extremity after radical mastectomy by dynamic lymphoscintigraphy.

Dynamic lymphoscintigraphy was performed in 17 cases using intradermal injections of Tc-99m Human Serum Albumin. They consisted of 15 post-mastectomy patients and 2 control cases. Their ages ranged from 34 to 80 years with a mean age of 56 years. Sequential images were obtained every 2 min for a period of 30 min by gamma camera with a large field of view. At the same time, data were stored every 30 sec by computer and time-activity curves of the lymph nodes and/or the soft tissues were created.

An image of axillary lymph nodes was identified 2 - 6 min after injection in control cases. In post-mastectomy patients, 5 types of the lymphatic flow were observed. Better collateral pathways were observed in patients with slighter lymphedema. Another finding which we found in this study was that the axillary lymph nodes were observed in 7 patients out of 15 who had received radical mastectomy.

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LOCAL LYMPHATIC DYNAMICS IN BREAST CANCER.

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Local lymphodynamics in the breast cancer were studied with a lymphoscintigram using Tc-99m-HSA. In the breast cancer group, Tc-99m-HSA 3 mCi was injected into tissue in the upper margin of the tumor, and control group into upper margin of the opposite areola. Data was collected using a digital gamma cameraGCA-90A. In the control group, predominance of the lymphatic flow in the parasternal region was recognized in all 10 cases. In the breast cancer group, predominance in the axillary region was recognized in 4 cases (19.6%) and in the parasternal region in 21 of 25 cases (80.4%).

The clearance (T 1/2) of Tc-99m-HSA at the site of injection was 85.6 minutes on the average in the control group, while 44.4 minutes, about half in the breast cancer group.

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VISUALIZATION OF LYMPH NODES BY IN-111 OXINE LABELED AUTOLOGOUS LYMPHOCYTES IN PATIENTS WITH MALIGNANT LYMPHOMA AND CHRONIC LYMPHOCYTIC LEUKEMIA.

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Visualization of lymph nodes was evaluated after the injection of In-111 oxine labeled autologous lymphocytes in 3 patients with Hodgikin's disease(HD), 5 with T cell type malignant lymphoma (T-ML), 8 with B cell type malignant lymphoma(B-ML), 11 with chronic lymphocytic leukemia(one T-CLL, and 9 B-CLL), and one adult T cell leukemia(ATL). Migration patterns of labeled cells was observed by Gammer camera with an on-line computer.

Lymph nodes were visualized in all patients with HD, T-ML, T-CLL and ATL, while lymph nodes were not visualized in 3 normal subjects, six of eighth patients with B-ML and eight of ninth patients with B-CLL.

Lymph nodes were observed within 1 to 18 hours after the infusion in patients with HD and T cell malignancy but in B-CLL, they were not observed until 68 hours after the injection.

Relationship between the visualization of lymph nodes and cell surface markers and histology of lymph nodes were reported.

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