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CLINICAL EVALUATION OF GA-67 AND Tl-201 SCANS IN PRIMARY LUNG CANCER. T.Togawa, H.Kato, H.Yonemoto, T.Hoshino, K.Hoshi, H.Muraoka, Y.Higuchi and K.Kimura. Department of Radiology, Fukushima Medical College Fukushima.

Quantitative Ga-67 and Tl-201 scans were performed on 18 cases with primary lung cancer (6 adenocarcinoma, 8 squamous cell carcinoma, 2 adenosquamous carcinoma, 2 small cell carcinoma). Both scanning images were collected by 128x128 matrix size, and the mean counts of ROI at the tumor (T) and at the opposite lung (N) were measured. Depth counting ratios (D) of Tl-201 and Ga-67 were measured preliminary in water phantom with plane sources. Corrected uptakes of both scans were defined as T-N/ND and corrected Tl-201/Ga-67 uptake ratio was defined as corrected Tl-201 uptake/corrected Ga-67 uptake. Corrected Tl-201/Ga-67 uptake ratio (Mean±SD) was 1.97±0.74 on adenocarcinoma, 0.34±0.23 on squamous cell carcinoma ($p < 0.01$ vs. adenocarcinoma) 1.2±0.06 on adenosquamous carcinoma ($p < 0.05$ vs. squamous cell carcinoma) and 0.49±0.13 on small cell carcinoma ($p < 0.05$ vs. adenocarcinoma). Corrected Tl-201/Ga-67 uptake ratio was well correlated with different histological types, and it was suggested that qualitative diagnosis was possible by quantitative Ga-67 and Tl-201 scannings in primary lung cancer.

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EFFICACY OF Tl-201 CHLORIDE SCINTIGRAPHY IN DIAGNOSIS OF THYMIC TUMORS; A COMPARISON WITH Ga-67 CITRATE AND Se-75 SELENOMETHIONINE SCINTIGRAPHY. F.Nakanishi, T.Kasuga, T. Ohata, T.Kobayashi, H.Yuzuriha, K.Yano and H. Hirano. Shinshu University School of Medicine. Matsumoto.

Scintigraphic evaluation was performed in 20 patients with thymic diseases which were proved at operation (14 with thymic tumors and 6 with myasthenia gravis without thymomas). In the group of thymic tumors there were 2 cases with thymoma of epithelial type, 4 cases with thymoma of lymphoid type, 6 cases with thymoma of mixed type and 2 cases with Hodgkin's disease. The detection rate of 14 cases with thymic tumors was 71% in Tl scintigram, 64% in Ga scintigram and 67% in Se scintigram respectively. In all 6 of non tumor group, the scintigraphic findings were negative. Intense Tl accumulation was shown in 2 cases with thymoma of epithelial type, but in whom low accumulation was shown in Ga and Se scintigram. One case with thymoma of lymphoid type showed intense accumulation in Tl scintigram, but who showed low accumulation in Se scintigram and negative accumulation in Ga scintigram. Tl images were founded to be superior to Ga or Se images. The results indicated that Tl scintigraphy was more useful in detecting thymoma than Ga or Se scintigraphy.

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GA-67 SCINTIGRAPHY IN NON-HODGKIN MALIGNANT LYMPHOMA. Y.Takagi, N.Ohigashi, A.Kubo, and S.Hashimoto. Keio University School of Medicine. Tokyo.

To assess the clinical usefulness of Ga-67 citrate scintigraphy (Ga-67 scan) in management of the patients with non-Hodgkin malignant lymphoma, 193 scans on 83 patients were reviewed. When used during the initial staging of the disease or during restaging because of recurrences, Ga-67 scans gave many false negative results in the cervical and axillary areas, but in 12 of 41 patients, in which Ga-67 scans were true positive in the primary sites, a change in the clinical staging occurred at the initial staging, because Ga-67 scans showed positive findings elsewhere in addition to the primary sites.

We compared Ga-67 scans with lymphangiography in 23 patients with proven non-Hodgkin malignant lymphoma. Five false negative results of Ga-67 scans were noted in patients with abnormal lymphangiography, whereas Ga-67 scan identified tumor localization that undetected by lymphangiography in 3 of 23 patients. In these 3 patients Ga-67 scans had influence on the clinical staging. We assessed that Ga-67 scan is a valuable diagnostic procedure, as it can influence on the clinical staging of the patients with non-Hodgkin malignant lymphoma.

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A REVIEW OF GA-67 SCINTIGRAMS OF PATIENTS WITH RENAL TUMORS. M.Honda, Y.Kookei, Y.Koga and M.Katayama. Showa University, Fujigaoka Hospital. Yokohama.

We reviewed Ga-67 scintigrams of patients with renal tumors. Total cases were 16 (6 male, 10 female). 7 cases were on the left side and 9 cases were on the right side. Accumulation of the kidneys or perirenal space was observed in a half of them (8/16). We divided them into small groups by the time when they were studied by Ga-67 scintigraphy before or after operation and embolization. Cases of perirenal abscess, tumor embolism in renal vein and post-embolization were involved in positive group. Positive cases of post-operation were first considered recurrence. But their clinical course were so long that the cause of accumulation was not known. Accumulation of renal tumor itself was not observed. There was no correlation between tumor location and pattern of accumulation. We must take care of the influence of inflammation and embolization when we observe Ga-67 scintigram of the patient with renal tumor.