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DIAGNOSIS OF MEDIASTINAL METASTASIS OF LUNG CANCER BY GA-67 ECT. K. Senda, K. Tauchi, M. Chujo, and M. Hasegawa. Dept. of Radiology, National Nagoya Hospital, Nagoya.

Comparing with X-ray CT (XCT) findings, Ga-67 ECT of the chest was evaluated with reference to detection of mediastinal metastasis in 42 patients with lung cancer. Both images of ECT by GE MaxiCamera 400A/T and of XCT by Toshiba TCT60A were obtained in the same patient within several weeks, and were compared on the same plane. In the para- and pretracheal region, hot areas visualized on ECT were well corresponding to nodular density areas more than 1cm in diameter on XCT. In the carinal and subcarinal region, about one half of the cases revealed any discrepancy between both CT findings. And, in the para- and subaortic region, only XCT was positive in the majority of the cases with the discrepancy. These discrepancies were thought to relate with pathological diagnosis of the primary tumor, the size of enlarged lymph-node, radiation therapy given, the criteria of abnormal CT findings, and so on. And, ECT tended to be false-negative in adenocarcinoma or small lymph-node metastasis, and to be false-positive in carinal or subcarinal lymph-node metastasis. Though ECT was apparently superior to conventional Ga-67 scan in order to distinguish mediastinal hot areas from the surrounding bony structures, ECT had some limitations to diagnose mediastinal lymph-node metastasis.

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RETROSPECTIVE ANALYSIS ON Ga-67, LIVER AND BONE SCINTIGRAPHERIES IN LUNG CANCER. K Itoh, K Fujimori, K Nakata, E Tsukamoto, M Furudate, H Miyamoto and Y Kawakami. Hokkaido University Hospital, Sapporo.

There have been Ga-67, liver and bone scintigraphies reviewed in 153 patients with lung cancer for 5 years from 1980 to 1984.

Overall positive rate of Ga scintigraphy was 70%(109/153) and 80%(109/137) without 16 patients of equivocal uptake. Squamous cell carcinoma was highest in true positive rate. However, no statistical significance in histological difference of Ga-67 uptake was noted. Ga scintigraphy was not statistically significant for evaluation of invasion to hilar lymphnodes. On the other hand, Ga scintigraphy was statistically useful for evaluation of invasion to mediastinal lymphnodes and tumor uptake was mostly correlated to size of the primary tumor. There were 67 patients (44%) with distant metastases. Ga scintigraphy was positive in 20 ones of these patients, liver scintigraphy in 13, bone scintigraphy in 22 and any of three scintigraphies in 40(60%).

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CLINICOPATHOLOGIC STUDY OF ^{201}Tl AND ^{67}Ga SCINTIGRAMS IN PRIMARY PULMONARY CARCINOMA. H. Yuzuriha, M. Morimoto, M. Ohashi, F. Nakanishi. Shinshu University.

^{201}Tl and ^{67}Ga scintigram-positive cases and its histological types, presence or otherwise of metastasis to the lymph node, clinically morbid postoperative periods, prognosis and relationship between tumor and CPM/g were studied in 30 cases on which curing and quasi-curing surgeries were performed by ^{201}Tl and ^{67}Ga scannings. ^{201}Tl and ^{67}Ga scintigram-positive cases were 18 out of 30 and 15 out of 30, respectively. By histological type, the cases were classified as: 11-adenocarcinoma, 6-squamous cell carcinoma and 1-large cell carcinoma, out of 18 ^{201}Tl scintigram-positive cases, and metastasis to the lymph node was observed in 11 cases out of 18. Regarding clinically morbid postoperative period, the cases were classified as: 7-I period, 5-II period and 6-III period. Cases in which recurrence and death resulted within the postoperative 2 years were 11 out of 18 (61.1%). 15 ^{67}Ga scintigram-positive cases were broken down histologically into 9-adenocarcinoma, 5-squamous cell carcinoma and 1-large cell carcinoma. Metastasis to the lymph node was observed in 10 cases out of 15. Cases classified by clinically morbid postoperative period were: 5-I period, 6-II period and 4-III period. Cases in which recurrence and death resulted within the postoperative 2 years were 9 out of 15. Cases in which ^{201}Tl and ^{67}Ga scintigrams

turned out to be both positive were 13, of which recurrence and death resulted within the postoperative 2 years were 8 out of 13. Cases in which both ^{201}Tl and ^{67}Ga turned out to be negative were 10, of which recurrence and death resulted within the postoperative 2 years were 2 out of 10. Based on the above results, usefulness of scintigram in pulmonary carcinoma is reported.