

Summary

Usefulness of ^{201}Tl SPECT in the Predication of Mediastinal Lymph Nodes Metastasis in Patients with Non Small Cell Lung Carcinoma (NSCLC)

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Predictivity of mediastinal lymph nodes metastasis of ^{201}Tl SPECT were examined before operation in 113 patients with non-small cell lung cancer (69 adenocarcinoma, 31 squamous cell carcinoma, 10 large cell carcinoma, 2 bronchiolo-alveolar carcinoma, 1 neuroendocrine cell carcinoma). Patients were classified into two groups, with or without lymph nodes metastasis according to the pathological diagnosis. We calculated parameters of ^{201}Tl SPECT early ratio, delayed ratio, retention index (RI) and maximal diameters. In addition, we calculated optimal cut-off value of RI to estimate the mediastinal lymph nodes metastasis. Mediastinal lymph nodes metastasis was confirmed pathologically in 62 patients. ER and DR did not show any statistical significance between two groups. Maximal diameters of primary tumor were also comparable between two groups. RI was signifi-

cantly higher in mediastinal lymph node metastasis positive group compared to that in mediastinal lymph node metastasis negative group.

The sensitivity (Sen), specificity (Spe), positive predictive value (PPV), negative predictive value (NPV) and accuracy (Acc) of ^{201}Tl SPECT were 82.2%, 82.3%, 85.0%, 79.2% and 82.3%. These parameters were similar of higher than 72.6%, 82.4%, 83.3%, 71.2% and 77.0% of chest CT.

The RI of ^{201}Tl SPECT was useful tool for predicting lymph nodes metastasis in non-small cell lung cancer. The optimum cut-off value of RI in the prediction of mediastinal lymph nodes metastasis was 35%. We should take into account of upstaging in cases with higher RI (> 35%).

Key words: ^{201}Tl SPECT, NSCLC, Mediastinal lymph nodes metastasis, Predictive value.