

Summary

Quantitative Study of ^{99m}Tc -Technegas SPECT for Ventilatory Impairment in Pulmonary Emphysema —Regional Distribution: Correlation of SPECT with Pulmonary Function Test—

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^{99m}Tc -Technegas scintigraphy is used for evaluation of abnormality of ventilation in pulmonary emphysema. Although the abnormality of ventilation distribution is very easy to find, there is not an objective index. The evaluation is subjective and different by each radiologist. It was also difficult to compare each cases and the clinical course in the same case. The present study for quantitative evaluation has proved that excellent correlations is obtained between the mean voxel values of the lung and stage classifi-

cation. Furthermore, a correlation is observed between the mean and $\text{FEV}_{1.0}\%$. These data indicate that quantitative analysis of SPECT seem to be useful to classify the clinical stage and compare the each cases. And respiratory function decreases as much as chronic pulmonary emphysema exists in the lower lung field.

Key words: Pulmonary emphysema, ^{99m}Tc -Technegas, SPECT, Quantitative study, Ventilation study.