Annals of Nuclear Medicine Vol. 14, No. 4, 293–298, 2000

Uptake of ^{99m}Tc-tetrofosmin, ^{99m}Tc-MIBI and ^{201}Tl in malignant thymoma

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^{99m}Tc-tetrofosmin, Thallium-201-chloride (^{201}Tl) and ^{99m}Tc-MIBI imagings were performed in a patient with malignant thymoma. Tracer uptake in the primary tumor was demonstrated. The tumor-to-background ratios of planar and SPECT imagings were 1.60 and 1.98 for ^{99m}Tc-tetrofosmin, 1.12 and 2.09 for ^{201}Tl, and 1.19 and 1.80 for ^{99m}Tc-MIBI, respectively. In another patient ^{99m}Tc-tetrofosmin and ^{201}Tl imagings were performed. Not only the primary tumor but also the direct invasions and metastatic lesions (bone metastases) were clearly detected. The tumor-to-background ratios of planar and SPECT imagings were 2.31 and 2.78 for ^{99m}Tc-tetrofosmin and 2.45 and 3.58 for ^{201}Tl, respectively. In ^{99m}Tc-tetrofosmin scintigraphy we acquired delayed images, and the tumor-to-background ratios of planar and SPECT delayed images were 1.20 and 1.86, the retention ratios were −1.11 and −0.92 and the retention indices were −48.1 and −33.1, respectively. Our preliminary results suggest that ^{99m}Tc-tetrofosmin is useful in detecting not only the primary tumor but also metastatic lesions from malignant thymoma.

Key words: thymoma, ^{99m}Tc-tetrofosmin, ^{201}Tl, ^{99m}Tc-MIBI, SPECT