

Application of Tc-99m-tetrofosmin as a tumor imaging agent: Comparison with Tl-201

Ali S. ARBAB, Kiyoshi KOIZUMI, Takao ARAI, Keiji TOYAMA and Tsutomu ARAKI

Department of Radiology, Yamanashi Medical University

Tc-99m-tetrofosmin SPECT was performed on 6 occasions in 4 patients with hypopharyngeal carcinoma, lung carcinoma, esophageal carcinoma and maxillary plasmocytoma and compared with Tl-201 SPECT. All lesions accumulated both Tc-99m-tetrofosmin and Tl-201. Early uptake ratios of Tc-99m-tetrofosmin were about 2 but those of Tl-201 were much higher (more than 3). Washout rates of Tc-99m-tetrofosmin were higher than those of Tl-201. There was a good positive correlation between the early uptake ratio of Tc-99m-tetrofosmin and that of Tl-201. The delayed uptake ratio and washout rate showed poor correlation. In conclusion, early uptakes of both the agents were similar but their retention patterns were different. Tc-99m-tetrofosmin may be used for tumor imaging though more studies are required to evaluate diagnostic accuracy and the significance of delayed images.

Key words: tumor, Tc-99m-tetrofosmin, Tl-201, dual isotopes, SPECT