

Thyroid carcinoma in solitary hot thyroid lesions on Tc-99m sodium pertechnetate scans

Katsuji IKEKUBO,* Megumu HINO,* Hidetomi ITO,* Masami OTANI,* Haruji YAMAGUCHI,* Yasuhiko SAIKI,* Kazuyo UI,* Yoko HABUCHI,* Takashi ISHIHARA** and Toru MORI***

**Department of Nuclear Medicine, **Department of Internal Medicine, Kobe City General Hospital, Kobe 650, Japan*

****Department of Internal Medicine, Kyoto University School of Medicine, Kyoto 606, Japan*

Sixteen patients with nonsuppressible solitary hot thyroid lesions (SHTL) identified on T₃ suppression images using Tc-99m sodium pertechnetate were studied over a period of 5 years. Of the 16 patients, 7 (44%) had papillary adenocarcinoma (PAC) and 9 (56%) had follicular adenoma (FA). Of the 7 patients with PAC, 3 were toxic and 4 nontoxic. Of the 9 patients with FA, 2 were toxic and 7 nontoxic. The Tl-201 chloride thyroid scans were useful in locating SHTL and revealing extranodular thyroid tissue. The echography was sensitive to visualization of the nodule structures. However, there were no significant differences between the clinical findings, radionuclide images, and echograms between for PAC and FA. All patients with PAC were treated by partial thyroidectomy and there were neither regional nor distant metastasis in any of them. In conclusion, our study provided the following extremely interesting result: SHTL in the present series have a higher incidence of malignancy than previously reported autonomously functioning thyroid lesions (AFTL). Histological examination is necessary for the diagnosis and management of SHTL and surgical treatment should be considered.

Key words: Solitary hot thyroid lesions, Tc-99m sodium pertechnetate, Papillary adenocarcinoma, Histological examination