

## Diagnosis of thyroid lymphoma and follow-up evaluation using Ga-67 scintigraphy

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A strong association between malignant lymphoma and Hashimoto's thyroiditis has frequently been reported. However, it is difficult to detect the lymphomatous transformation of Hashimoto's thyroiditis in the early stage. The purpose of the present study was to examine the usefulness of  $^{67}\text{Ga}$  scintigraphy in the diagnosis and evaluation of the therapeutic effects during follow-up, in patients with a suspected diagnosis of primary thyroid lymphoma. Twenty-five patients who were suspected of having primary thyroid lymphoma and had undergone  $^{67}\text{Ga}$  scintigraphy were studied.  $^{67}\text{Ga}$  planar scintigraphy was performed 72 hours after injection of  $^{67}\text{Ga}$ -citrate. The degree and pattern of  $^{67}\text{Ga}$  accumulation were graded visually. Histopathology on biopsy examination revealed thyroid lymphoma in 17 and Hashimoto's thyroiditis in 8 patients. Abnormal accumulation of  $^{67}\text{Ga}$  in the thyroid was seen in all of the 17 thyroid lymphoma cases with additional mediastinal and abdominal involvement in one. Fifteen of 17 thyroid lymphoma patients also underwent  $^{67}\text{Ga}$  scintigraphy 2–4 weeks after chemotherapy and/or radiotherapy. All 15 patients showed diminishing  $^{67}\text{Ga}$  accumulation and a good clinical course. In one patient with local recurrence, abnormal accumulation could be depicted by follow-up scintigraphy. However, diffuse or enlarged accumulation in the thyroid was seen in all of the 8 Hashimoto's thyroiditis cases. The degree of abnormal accumulation in the thyroid in clinically active phase thyroiditis was more intense than that in the chronic phase thyroiditis.  $^{67}\text{Ga}$  scintigraphy was helpful to confirm the diagnosis of thyroid lymphoma and to evaluate the therapeutic effects during follow-up. However,  $^{67}\text{Ga}$  scintigraphy may not always distinguish thyroid lymphoma from Hashimoto's thyroiditis, especially the active phase of the disease.

**Key words:** thyroid lymphoma, Hashimoto's thyroiditis,  $^{67}\text{Ga}$  scintigraphy, therapeutic effects