

THYROID GLAND

Routine radionuclide imaging not justified in patients with hyperthyroidism

Thyroid radioiodine imaging should not be routinely performed in patients with hyperthyroidism, new data reveal, as these scans provide little additional information over standard clinical and laboratory data.

Radionuclide imaging is widely used for the diagnosis, management and pretreatment assessment of patients with hyperthyroidism. However, as the etiology of hyperthyroidism can often be established on the basis of clinical data alone and the prognostic information offered by such scans is questionable, the necessity of the routine use of radionuclide imaging in these patients—which is expensive and increases patients' exposure to radioactive isotopes—is debated.

In a retrospective study of patients with hyperthyroidism, Okosieme and colleagues reviewed 881 scintigraphy scans of thyroid radioiodine uptake and compared the diagnoses that were based

on clinical data only with those that were made after scintigraphy. The investigators found a good agreement between clinical and postscintigraphy diagnoses; diagnoses were correctly matched in 74%, mismatched in 6%, and clinically indeterminate in 20% of patients. In the majority of patients, scintigraphy studies provided little additional information over the data that were obtained from standard clinical and immunological evaluation.

In the second part of the study, the investigators found no significant associations when they assessed relationships between pretreatment ¹²³I uptake and scintigraphy-based diagnosis and the outcome of ¹³¹I treatment. The risk of treatment failure, however, was increased in those patients who received antithyroid medication 1 week before radioiodine treatment.

The authors recommend that radionuclide imaging should be performed only in those patients with hyperthyroidism whose diagnosis cannot be made on the basis of clinical diagnosis alone. “Selective imaging of patients with an unclear clinical diagnosis (20% in our study) could reduce costs without compromising diagnostic accuracy or treatment outcomes,” suggests Onyebuchi E. Okosieme (Prince Charles Hospital, Merthyr Tydfil, UK). “The prognostic value of routine pretreatment radioiodine uptake scans will require further evaluation.”

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