ANSWER TO PHOTO QUIZ (PAGE 231)

UNDEFINED MASS IN HEAD-NECK REGION ON IODINE-123 SCAN

DIAGNOSIS

This patient has an ectopic lingual thyroid, as there is high iodine uptake in the lesion, indicating that the lesion consists of thyroidal tissue. In addition, no iodine uptake was seen in the eutopic gland region, which means that the lingual thyroid is the only thyroid gland present. Thyroid function tests showed slightly elevated thyroid-stimulating hormone (TSH) serum concentrations (6.5 mU/l; reference range 0.27-4.2 mU/l) with normal free T4 serum concentrations (15.7 pmol/l; reference range 10.0-26.0 pmol/l). Thyroid antibodies were negative. During follow-up, thyroid function normalized (TSH 3.8 mU/l and free T4 16.2 pmol/l).

Thyroid gland ectopia is a condition which results from a developmental abnormality. During embryology, the thyroid descends from the pharyngeal gut towards the anterior neck region.[1] When descending fails, the thyroid will be localized in the descending path (lingual, sublingual, prelaryngeal or even substernal).[2] In most cases, the ectopic thyroid is the only gland present.

Thyroid ectopia is mostly asymptomatic. The incidence might be as high as 1 in 200,000 people.[1] When symptomatic, most patients present with symptoms due to any kind of obstruction such as cough, dysphagia, and dyspnea.[2] Most of the symptoms occur during childhood, adolescence, pregnancy, or menopause; this might be the result of increasing physiological demands for thyroid hormone, causing TSH concentrations to increase, resulting in enlargement of the gland. The ectopic thyroid is usually small and does not always have the capacity to fulfil the body's physiological needs. Approximately half of the patients are euthyroid; 40% have subclinical hypothyroidism and about 6% have overt hypothyroidism. The ectopia usually represents normal thyroid tissue, however nodular disease has also been described.[1]

Diagnosis should be made with nuclear imaging. It is a sensitive and specific modality for identification of thyroid tissue and thus for differentiation between thyroid ectopia and other masses in the head-neck region.[1,2]

Asymptomatic patients do not require therapy. Standard care for hypothyroidism should be initiated.[2] Not much is known about thyroid function of these patients during pregnancy. Regular measurements of thyroid function tests, follow-up by an endocrinologist and supplementation of levothyroxine in case of overt hypothyroidism is suggested. For patients who are euthyroid, but have mild symptoms due to obstruction, no consensus on optimal treatment is currently available. In addition to surgical intervention and radioactive iodine therapy,[2,3] combination treatment with levothyroxine and iodine might be beneficial. In a multicentre trial, this strategy has been shown to to reduce nodular volume in euthyroid patients.[4] Based on rationale, this strategy might also reduce obstructive complaints in patients with thyroid ectopia. However, this has not been formally tested in the setting of a clinical trial. Further evaluation of different therapeutic strategies in these patients is needed.

REFERENCES

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