

## Lingual thyroid in a young woman

A 34-year-old woman presented to the Outpatient Clinic, Prince of Wales Hospital, Hong Kong, complaining of a lump in her throat. She had neither dysphagia nor stridor and was euthyroid. On routine examination, a 2 cm mass was found to be occupying the tongue base in the midline. Nasopharyngoscopy confirmed that there was no airway obstruction. The photograph shows the lingual thyroid (L) viewed via a 90° telepharyngoscope. The posterior third of the tongue (T), epiglottis (E), and posterior pharyngeal wall (P) can be clearly seen. Axial computed tomography (CT) and a radioisotope study confirmed this mass to be the patient's only functioning thyroid tissue. The patient, therefore, has a lingual thyroid.

Estimates of the incidence of lingual thyroid range from 1:10 000<sup>1</sup> to 1:100 000.<sup>2</sup> The condition has a 3:1 female preponderance and has two peak ages of presentation. The first is during childhood (mean, 12.5 years) and the second is in adult life (mean, 50 years).<sup>3</sup> It is possible that increased metabolic stress leads to hypertrophy of the gland under thyroid-stimulating hormone stimulation and precipitates symptoms.<sup>4</sup>

The base of the tongue is the most common site for ectopic thyroid tissue. Its presence results from a developmental anomaly secondary to failure of migration of thyroid tissue at the base of the tongue. In 70% of patients there is no cervical thyroid<sup>4</sup> and the lingual thyroid represents their only functioning thyroid tissue. Following clinical examination, diagnosis is confirmed by performing functioning radioisotope scanning: the scan will also show if the lingual thyroid is the patient's only functioning thyroid tissue. This essential information is required before any excision of the tongue mass as this would render the patient hypothyroid. Both CT and magnetic resonance imaging scans offer anatomical detail that may be useful in planning surgery. If the mass is only minimally symptomatic and there is no suspicion of malignant transformation (reported but rare),<sup>2</sup> exogenous suppression therapy with thyroxin will decrease the size of the gland over time. This is the treatment of choice.

Any symptomatic lingual thyroid requires reduction in size to relieve the obstruction. This can be achieved either by radio-iodine or by surgical excision. Using radio-iodine has the disadvantage that it ablates any other functioning thyroid tissue,



Radio-iodine is contraindicated in women of child-bearing age because of the risk of teratogenesis, and in children, because of the risk of carcinogenesis. This approach can also cause acute swelling of the gland, exacerbating symptoms and perhaps even placing the airway at risk, necessitating a temporary tracheostomy. Radio-iodine is therefore used only when the patient is either unfit for anaesthesia or refuses surgery. Surgical excision may be either via an intraoral approach or externally via a median or lateral pharyngotomy. Post-operative hypothyroidism can be avoided by auto-transplantation of the excised tissue, usually into the anterior abdominal wall.<sup>4</sup>

This patient was managed with replacement therapy and is now asymptomatic. Surgical intervention is not planned.—Submitted by PMJ Scott, G Soo, CA van Hasselt, Division of ENT, Department of Surgery, and J Kew, Department of Diagnostic Radiology & Organ Imaging, The Chinese University of Hong Kong, Prince of Wales Hospital, Shatin, Hong Kong.

### References

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