Lingual Thyroid

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Introduction

Lingual thyroid is an uncommon condition that is seldom seen in clinical practice. Owing to its rarity most clinicians have limited experience with this condition. A review of the literature reveals predominantly isolated case reports or small series. The largest series is 12 patients reported over thirty years ago (Kamat). A wide variety of treatment options have been described. The authors present two cases of lingual thyroid with contrasting treatment.

Methods

Institutional review board approval was obtained. The lead author treated two patients with a lingual thyroid at Wellington Hospital between September 2003 and July 2010. Details of the clinical presentations and treatments are presented.

Patients

A 36 year old woman presented with a several year history of progressive orthopnea and sleep apnea. She was only able to sleep in a sitting position for short periods of time. She had a history of partial endoscopic resection of a lingual thyroid. She had six children and with each pregnancy her symptoms progressed. On examination she had a large round mass at the base of her tongue and a fullness in the submental region. A CT scan showed the extent of the pathology (figure 1). The lingual and submental masses were excised through a transcervical, transhyoid, midline pharyngotomy approach (figure 2). Pathology was reported as benign nodular thyroid tissue. She was placed on a thyroxine replacement therapy and remains free of disease four years later.

A 33 year old woman had a known small, stable, symptomatic lingual thyroid (figure 3)and was on thyroxine replacement therapy for hypothyroidism. A thyroid scintiscan confirmed localized uptake in the midline base of the tongue. A CT scan showed an enhancing 1 cm mass in the tongue base. She was planning to get pregnant and it was anticipated that the lingual thyroid would increase in size with pregnancy. She underwent transoral laser removal of all lingual thyroid tissue. Pathology was reported as benign thyroid tissue. She subsequently became pregnant. When examined during the second trimester no lingual thyroid was seen.

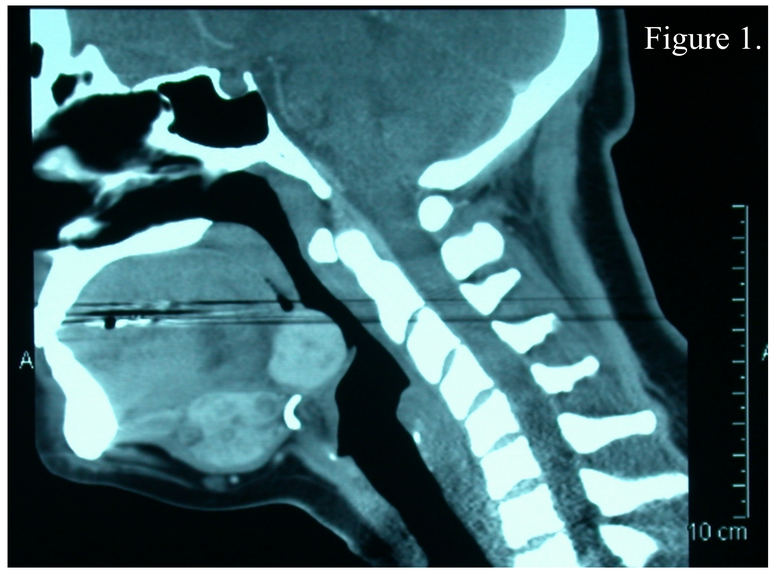

Figure 1.

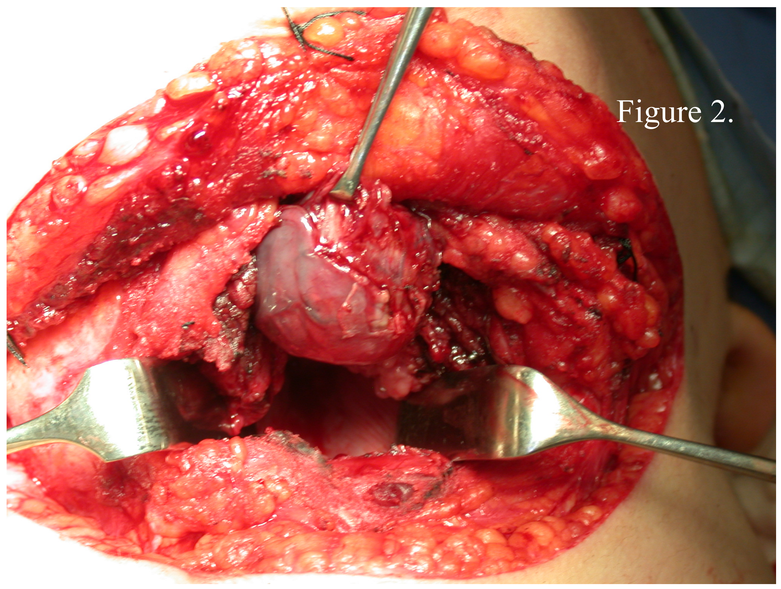

Figure 2.

Figure 3.

Discussion/Conclusions

Lingual thyroid is an uncommon condition with an estimated incidence of 1:100,000, females being affected four to eight times more frequently than males (Rahbar). Approximately one third of patients with a lingual thyroid are hypothyroid. Patients may be asymptomatic and the condition detected only when the base of tongue region is visualized during anesthesia or clinical examination. Patients may present with symptoms of dyspnea, stridor, dysphagia, obstructive sleep apnea (Barnes), bleeding or nodal metastasis from malignancy arising within a lingual thyroid (Kennedy). Investigations include thyroid function tests, thyroid scintiscan, ultrasound, CT and MRI scans. Treatment needs to be tailored to the clinical presentation. In some cases observation may be appropriate, while in other cases intervention is required. Treatments include thyroxine replacement or suppressive therapy, radioactive iodine ablation, radiofrequency ablation or surgery. Surgical approaches described include transoral laser surgery, transoral midline glossotomy, suprahyoid pharyngotomy, lateral pharyngotomy and midline mandibulotomy. Transoral robotic surgery would be an ideal way to resect some lingual thyroids. Both subtotal and total excision of a lingual thyroid have been advocated. Transposition of lingual thyroid and autotransplantation of lingual thyroid have been described.

In patients with a suspected lingual thyroid we advocate thyroid function tests, iodine scintiscan and CT scan. In most cases complete removal of the lingual thyroid via a transoral laser or robotic approach is appropriate followed by thyroxine replacement therapy.

References

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