CASE REPORT

Lingual Thyroid - A Lesson to Learn

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Summary

We present a case of a middle-aged woman with a mass in the posterior third of the tongue which was mistakenly diagnosed as a tongue haemangioma. The tumour was successfully excised via a midline mandibular osteotomy and tongue splitting approach. The histopathology examination, however, revealed the 5x4 cms mass to be a lingual thyroid. The salient features of this unusual presentation of a thyroid enlargement will be discussed.

Key Words: Lingual thyroid, Tongue

Introduction

Lingual thyroid is a rare clinical entity that occurs due to failure of decent of the thyroid enlarge during embryogenesis. It is estimated to occur in between 1:3000 and 1:100 000[1]. It occurs more commonly in females with a reported female to male ratio of up to 7:1.9[1]. Thirty-three percent of these patients have hypothyroidism[1,2]. The presentations vary from an accidental finding to a life threatening airway obstruction. A careful assessment is required before contemplating any surgery due to the lingual thyroid is the only functioning thyroid tissue in 70% of cases[1,2]. Most cases are treated medically and surgical resection has been reserved for those with severe dysphagia or a compromised airway[3].

Case Report

A 57-year-old, previously fit and well lady was referred to us with a 3-month history of worsening dysphonia, dysphagia and stridor during sleep. She had no other constitutional symptoms and systemic enquiries were unremarkable. Physical examination revealed a large midline mass on the posterior third of the tongue occupying the oropharynx in an otherwise healthy middle age woman. The mass was globular, 5x4cm in size, reddish blue in colour, smooth surface and non-tender. A fibreoptic laryngoscopic examination showed that the mass was situated one inch distal to and pushing the epiglottis backward.

Computed tomography (CT) scan was performed and reported as an enhancing posterior tongue lesion that was consistent with a haemangioma. This was further confirmed by a selective external carotid angiography. Embolisation was however, not attempted due to difficulty in cannulating the specific feeding vessels.

Her symptoms warranted surgical treatment. She underwent endotracheal intubation using the fibreoptic-assisted technique. The excision of the mass was undertaken via a midline mandibular and tongue splitting approach. In view of the bleeding potentials of a haemangioma, both sides of the external carotid arteries were identified via separate neck incisions in order to get control should excessive bleeding occur. Intraoperatively, the mass was found to be well encapsulated and it was shelled out relatively easily. Postoperatively, the patient was nursed in the intensive care unit and intubated for seven days due to prolonged tongue oedema. She was commenced on nasogastric feeding via a Ryle's tube for 12 days before resuming normal diet.

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Histopathology examination result revealed the mass to be normal lingual thyroid tissue. The free T4 and TSH levels were then measured to be 9.7 pmol/L and 27.5 mU/ml respectively. Subsequently the radioiodine (^{123}I) scan confirmed that it was the only thyroid gland present in this patient. After a three-week stay, she was discharged with a life long thyroxine supplement and to be followed up regularly.

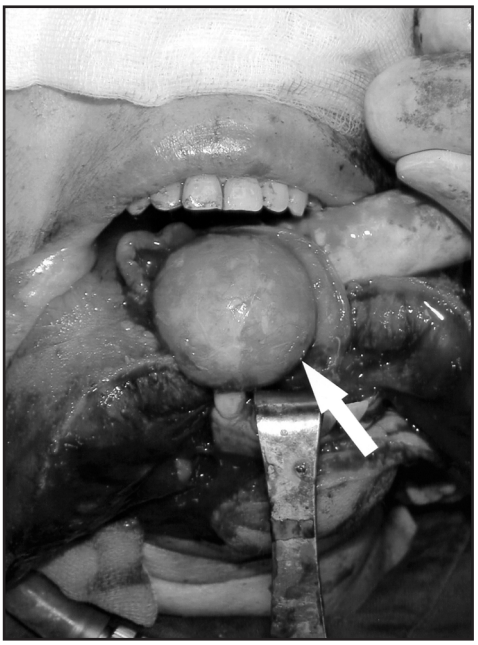

Fig. 1: Intra-operative finding of the tumour

Discussion

A wide range of conditions can occur on the posterior aspect of the tongue such as haemangioma, dermoid cyst, lipoma, and lingual thyroid. It is difficult to accurately diagnose posterior third tongue lesions preoperatively due to their relative inaccessibility for clinical examination. It is especially so in this lady due the external 'vascular' appearance between the lingual thyroid and haemangioma. Physicians should realise that there are two groups of patients who commonly present with lingual thyroid. The first is infants whom the diagnosis is picked up during routine examination and the second group is later in life, during times of growth and increased metabolic activity such as puberty, pregnancy and menopause[1].

Mislead by the CT scan findings which were further supported by the selective angiography, we did not request any further investigations particularly a radioiodine scan or even a thyroid function test for a differential diagnosis of a lingual thyroid. In this regard a high clinical index of suspicion would have lead us to the diagnosis. However, suppression therapy with thyroxine would have not helped her symptoms as she already developed dyphonia, dysphagia and sleep apnoea at the time of presentation due to the sheer size of the mass.

Surgical resection was indicated in this patient. She underwent an extensive surgical procedure for the excision of this benign lesion. In view of the difficult access to the mass, we are of the opinion that this technique is the safest approach that affords excellent visualisation, with adequate vascular control that facilitates resection. Fortunately, the postoperative oedema resolved early and she did not require a tracheostomy.

In conclusion, we like to share our experience in the diagnosis and treatment of a posterior tongue mass that eventually turned out to be a lingual thyroid. It is a rare clinical entity but still the commonest mass in the midline of the posterior third of the tongue. Hence, any similar lesion should be carefully investigated to diagnose or exclude a lingual thyroid. As medical students we tend to remember the rare and obscure but as clinicians we seem to forget the facts that fascinated us all those years ago! Long live the art of differential diagnosis!

References

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