

# A rare cause of obstructive sleep apnea syndrome: lingual thyroid

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Received: 14 November 2010 / Revised: 18 January 2011 / Accepted: 4 March 2011 / Published online: 15 April 2011  
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## Introduction

Thyroid tissue descends to its normal pretracheal location on the seventh week of fetal life via the thyroglossal duct connected to the tongue base from the foramen cecum from which it originates during embryological development. Ectopic thyroid tissue develops as the result of exposure of thyroid tissue totally or partially to a defective descent related to the embryological defect of the tongue base. Lingual thyroid is the most common location of ectopic thyroid tissue and often located on the juncture of the buccal and pharyngeal parts of the tongue [1]. While 90% of ectopic thyroid tissues are seen on the tongue, they have also been reported in sublingual, submandibular, prelaryngeal, tracheal, mediastinal, cardiac, esophageal, diaphragmatic, and peripharyngeal sites. Although the prevalence of lingual thyroid has been reported between 1:100,000 and 1:300,000, its incidence among patients in whom hypothyroidism has been detected is between 1:4,000 and 1:10,000. It is seen at a 7-fold greater frequency in women [2]. Although the patients are usually asymptomatic, it can lead to symptoms such as dysphonia, dysphagia, and sensation of foreign body in the throat, or it can mimic a lingual tumor [2, 3].

Obstructive sleep apnea syndrome (OSAS) is an important clinical condition resulting from anatomical narrowings developing in the upper respiratory tract during sleep, affecting the quality of life substantially, leading to serious complications. Herein, we present a 24-year-old male patient with OSAS caused by lingual thyroid, and along with this rare case, we discuss the clinical features of lingual thyroid, imaging methods, and therapeutic approaches.

## Case report

A 24-year-old male patient who had presented to the center of sleep disturbances with complaints of snoring and diurnal sleepiness, underwent polysomnography (PSG), and was diagnosed as having OSAS (Apnea–Hypopnea Index (AHI) 20.2, AHI-REM 36.3, AHI-supine 32.7) exacerbating during REM sleep and supine position presented to our clinic. His Epworth sleepiness scale (ESS) score was 14. His clinical examination using fiberoptic nasopharyngoscopy revealed a solid, spherical mass, arising at the base of the tongue, filling the vallecula and extending to hypopharynx and obstructing the visualization of the larynx (Fig. 1). He had no history of either past or present thyroid disease. Examination of the neck revealed no palpable thyroid gland in the normal pretracheal position and no cervical adenopathy. On ultrasonography (USG) of the neck, there was no echogenicity suggestive of thyroid gland in its original anatomical location; however, there was an echogenicity of a solid mass formation in the base of the tongue. The mass was 4 cm in diameter and had well-defined contours. Thyroid hormone tests showed elevated thyroid stimulating hormone concentrations and normal FT3 and FT4 concentrations. Thyroid scintigraphy showed an uptake region at the base of the tongue,

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