

# Ectopic Lingual Thyroid in a Young Female Patient with Mood Disturbances

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## 1. Key words

Lingual thyroid, Thyroid scintigraphy; Depressive episode; Hypothyroidism

## 2. Introduction

Ectopic thyroid - i.e. thyroid tissue being in locations other than the normal anterior neck region - is a rare disease with a prevalence of 1 per 100,000 to 300,000 people [1,2]. This condition results from developmental defects of thyroid gland embryogenesis passing the thyroglossal duct from the primitive foregut to the final position [2]. Lingual thyroid is the most common form of ectopic thyroid, and is reported to be more common in females [3,4]. In about 80% of patients it is the only thyroid tissue present [2]. Neck ultrasound and thyroid scan are the cornerstones of diagnosis. Clinical manifestation and consecutive therapeutic approach can be quite variable.

## 3. Case

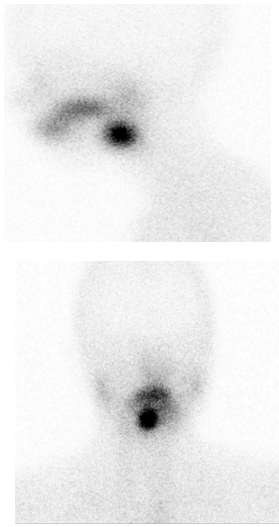
A 14-year old girl applied to the pediatric department with a one month history of fatigue, sensitivity to cold temperature and eventually depressed mood. Clinical history presented no other circumstances but tonsillectomy and intolerance to some nutrition as wheat. Height at 159cm and body weight of 45kg were in the normal range. Laboratory examinations showed subclinical hypothyroidism with a TSH slightly elevated at 6.0 mU/l and were otherwise normal. Thyroid specific antibodies were negative. Consecutively she was presented at the Institute of Nuclear Medicine of our hospital. As ultrasound showed the absence of orthotopic thyroid tissue thyroid scan with Tc-99m was performed. Scintiscan images revealed ectopic lingual thyroid (**figure 1**). A substitution with 50 µg levothyroxine was initialized, at control examination six months later she had no complaints and felt well. Thyroid laboratory values had normalized under the medication which was continued.

## 4. Discussion

Lingual thyroid is considered to be the most frequent localization of ectopic thyroid tissue [2] and of female predominance, as presented in our case as well. The mean age at presentation is about 40 years [2], so diagnosis in our adolescent patient was possible at an early stage. Lingual thyroid may be an incidental finding, but it is stated that most patients present with hypothyroidism [2]. On the contrary, Gu et al. [3] found in series of 42 Chinese patients with ectopic thyroid euthyroidism to be the most frequent thyroid function, followed by subclinical hypothyroidism with a frequency of 35% [3]. In our patient subclinical hypothyroidism was accompanied by a mild clinical picture of suggestive thyroid hypo function responsive to thyroid hormone treatment. An association with autoimmunity - as described in some cases [1,3] - was not observed. When clinical signs of obstruction, pain or hemorrhage are present operation might be the ther-

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apy of choice, radioiodine ablation can be considered an alternative to manage the mass effect of the lesion [2,5]. The incidence of malignancy is very low and is estimated at 1% [3], therefore operation or fine needle aspiration is not mandatory. Anyhow, we decided to continue with yearly clinical controls of our patient.



**Figure 1:** Anterior (a) and lateral (b) view of thyroid scan after 20 min. of i.v.  $^{99m}\text{Tc}$ -pertechnetat injection:

The images show a circumscribed accumulation of the tracer in the tongue base corresponding to a median lingual ectopic thyroid. Some weak uptake of the tracer can be observed at the salivary glands. There is obviously no orthotopic uptake in the thyroid bed.

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