

# From hemoptysis to diagnosis of congenital hypothyroidism – a diagnostic pitfall

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Clinical case reports -  
Thyroid/Others

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## Introduction

**Congenital hypothyroidism (CH)** is the most common congenital endocrine disorder. It occurs in Europe with incidence of 1:3000-1:4000. **Thyroid dysgenesis – agenesis, hypoplasia or ectopy** – is responsible for 80-90% of CH. An **ectopic thyroid gland** is an uncommon inborn anomaly and is typically located along the thyroglossal duct. Only few cases of CH due to **lingual thyroid** diagnosed in adult were reported in the literature so far. An ectopic lingual thyroid occurs in **1:100 000 to 1:300 000**.

## Case report

A 31-year-old man has been admitted to Department of Pulmonology with **hemoptysis without cough**. Bronchofiberoscopy did not explain the reason of hemoptysis. The CT scan of the chest revealed multiple small nodules in both lungs. Suspicion of metastasis to the lungs has been raised. The patient was referred for **PET**. The study of PET-CT showed marked regression of size and number of lung nodules and **increased uptake of <sup>18</sup>F-FDG in the region of right tonsil and base of tongue**. Head **MRI** was performed and disclosed tumor of the base of tongue (size 37x32x35 mm), compressing the tonsil and epiglottis. After **ENT consultation and microlaryngoscopy** patient was referred to endocrinologist with suspicion of lingual thyroid goiter.

The **neck ultrasound** revealed absence of orthotropic thyroid gland and presence of ectopic thyroid in sublingual region. At the time of diagnosis patient was **hypothyroid with TSH level 21.8 IU/ml**. Autoimmune etiology of hypothyroidism was excluded. Because of pressure symptoms and contraindication to surgery, **22 mCi of <sup>131</sup>-radioiodine** was administered and **L-T4 replacement therapy** had been introduced. In the cytological material from ultrasound-guided fine needle aspiration biopsy (FNAB) no signs of malignancy were noted.

## Conclusions

The reported case is exceptional because of **advanced age at diagnosis** and unusual clinical presentation. **Bleeding and hemoptysis**, next to the **local symptoms, dyspnea, dysphagia and dysphonia** can be present in case of lingual thyroid. The described case indicates that **PET-CT may constitute useful examination in diagnostic process of ectopic thyroid gland**.

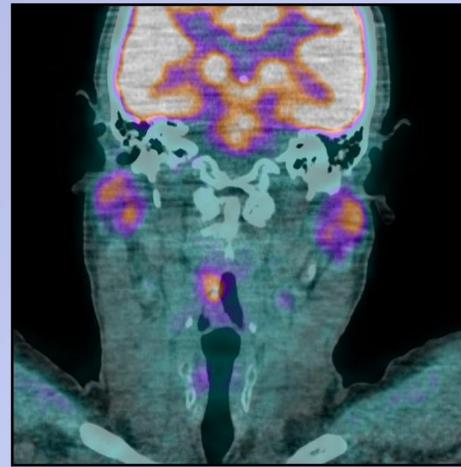


Fig.1

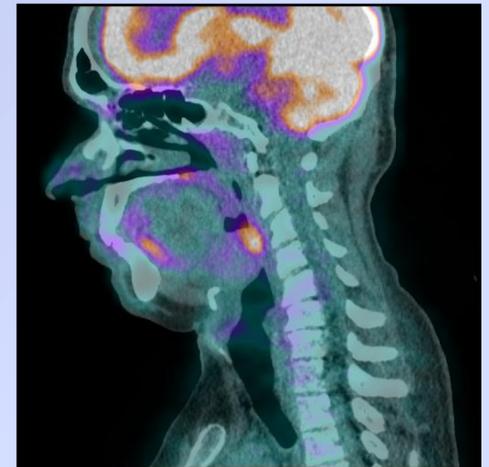


Fig.2

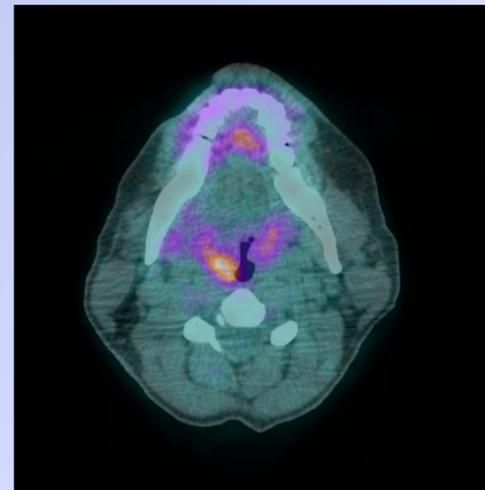


Fig.3

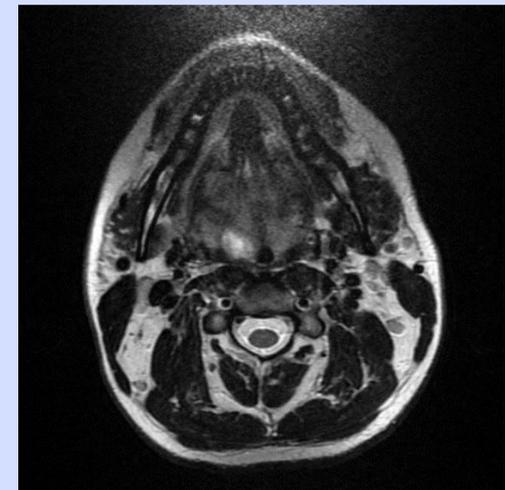


Fig.4

Fig. 1,2,3 – PET-CT - increased uptake of <sup>18</sup>F-FDG in the region of right tonsil and base of the tongue (site of ectopic lingual thyroid).

Fig.4 – Head and neck MRI – lingual thyroid.

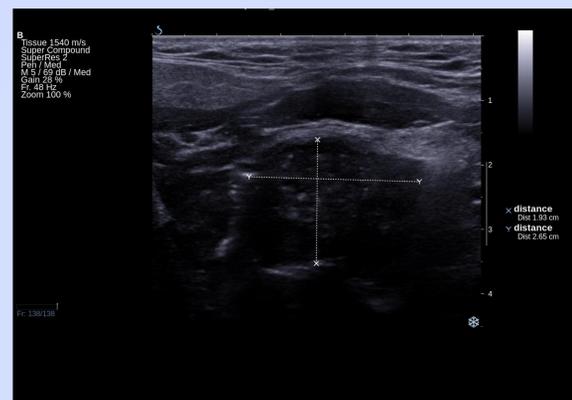


Fig. 5 – Neck ultrasound - ectopic thyroid tissue at the base of the tongue (size 26.5x19.3 mm).

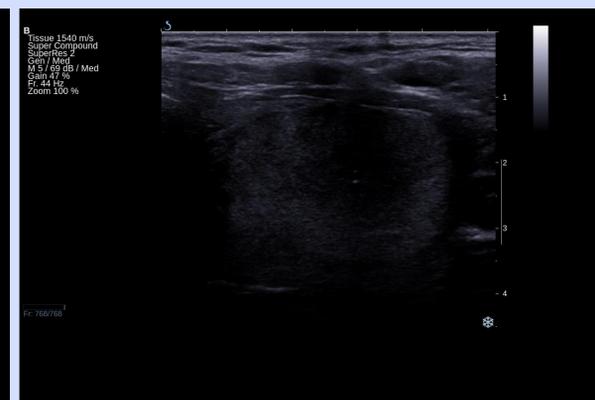


Fig. 6 – Ultrasound-guided fine needle aspiration biopsy of lingual thyroid.

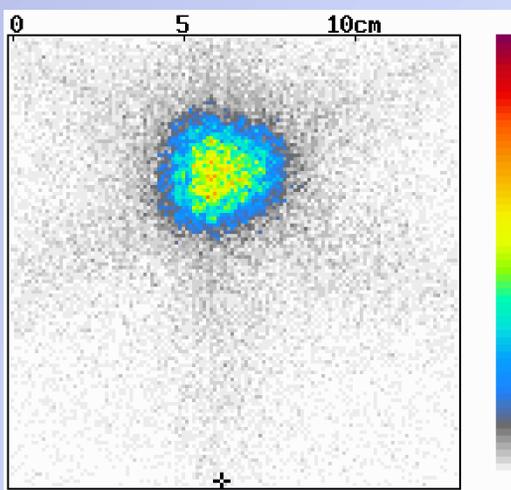


Fig. 7 – Lingual thyroid in I-131 scintiscan.

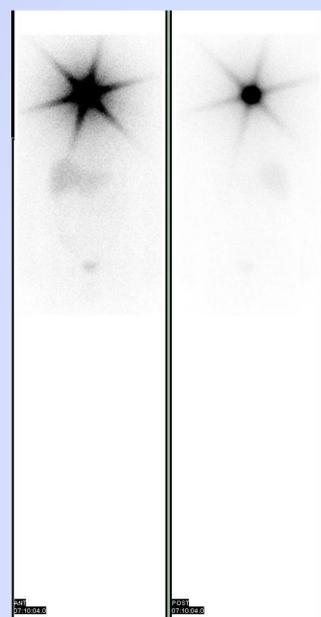


Fig.8 – Whole body I-131 scintiscan.

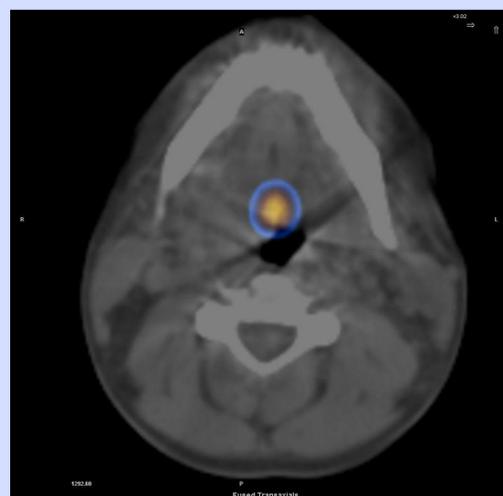


Fig. 9 – SPECT-CT – transverse projection.

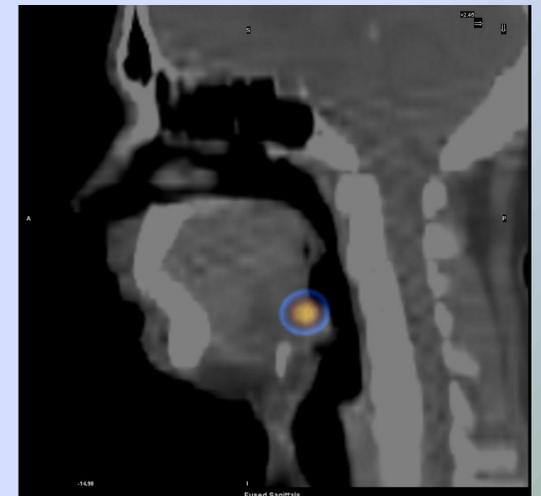


Fig. 10 – SPECT-CT – sagittal projection.

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