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Case Report

Diagnostic evaluation of a case of lingual thyroid ectopia

Valeria Fiaschetti, Giulia Claroni, Angela Lia Scarano, Orazio Schillaci, Roberto Floris*

Department of Diagnostic Imaging, Molecular Imaging and Interventional Radiology, University Hospital Tor Vergata, Viale Oxford 81, 00133 Rome, Italy

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ABSTRACT

Thyroid ectopia can occur when the process of thyroid embryogenesis fails. Here, we present the case of a 30-year-old woman with thyroid ectopia that was discovered during magnetic resonance imaging of cervical spine for referred neck pain. Imaging revealed the presence of an encapsulated mass at the base of her tongue. The patient was not symptomatic for any compression of the airways. Diagnosis of ectopic lingual thyroid was confirmed by ^{99m}TC scintigraphy. Incidental diagnosis of thyroid ectopia in asymptomatic adult patients is rare, and it should be considered on diagnostic imaging in case of an anterior midline cervical mass.

Case report

A 30-year-old woman with no significant medical history presented with long-lasting neck pain. The patient's family, surgical, and medication history was noncontributory. She had 2 uncomplicated pregnancies in the past, and she was not taking any medication at that time. Her physical examination was unremarkable. She came into the outpatient clinic of our institution for magnetic resonance imaging (MRI) of the cervical spine.

Cervical spine MRI demonstrated soft tissue mass at the base of tongue. On both T1- and T2-weighted sequences, the mass showed heterogeneous signal intensity, and multiple cysts were visualized in its central portion. This tissue did not have any significant mass effect on the surrounding structures or cause airway compression (Fig. 1).

MRI examination of the neck with gadolinium was then performed, confirming the presence of the encapsulated midline mass with small cysts within the tissue, localized on the upper edge of the epiglottis. It appeared isointense if compared to the surrounding musculature on T1-weighted sequences. No signs of compression were evident. The mass demonstrated early enhancement, which persisted into the late contrast phase (Figs. 2-4).

At this time, the diagnosis of a lingual thyroid (LT) was suspected. Laboratory tests showed a free triiodothyronine (FT3) of 3.3 pg/mL (normal range, 2.0-4.2 pg/mL), a free tetraiodothyronine (FT4) of 10.5 pg/dL (normal range, 9.3-16.0 pg/dL), and thyroid-stimulating hormone of 17.848 IU/mL (normal range, 0.37-4.2 IU/mL).

Ultrasound examination of the neck revealed the absence of the thyroid gland in the pretracheal region and no lymphadenopathy of the cervical packages. The patient performed ^{99m}TC scintigraphy: isotope uptake was observed at the base of tongue in the sublingual region, and the pretracheal region did not show any ^{99m}TC uptake (Fig. 5). The suspected diagnosis of lingual localization of thyroid ectopia was then confirmed.

Competing Interests: The authors have declared that no competing interests exist.

* *Corresponding author.*
E-mail address: giuliaclaroni@hotmail.com (G. Claroni).

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Fig. 1 – Cervical spine magnetic resonance imaging in a 30-year-old woman with neck pain. T2-weighted sequence on the sagittal plane showing lingual ectopic thyroid (indicated by arrow).

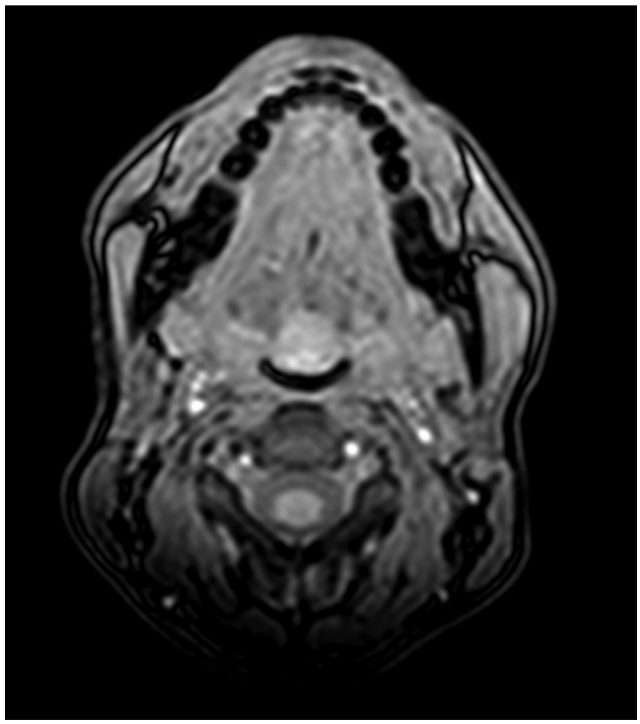

Fig. 3 – Magnetic resonance imaging THRIVE sequences on the axial plane, showing early vascularization of the ectopic thyroid tissue after gadolinium injection.

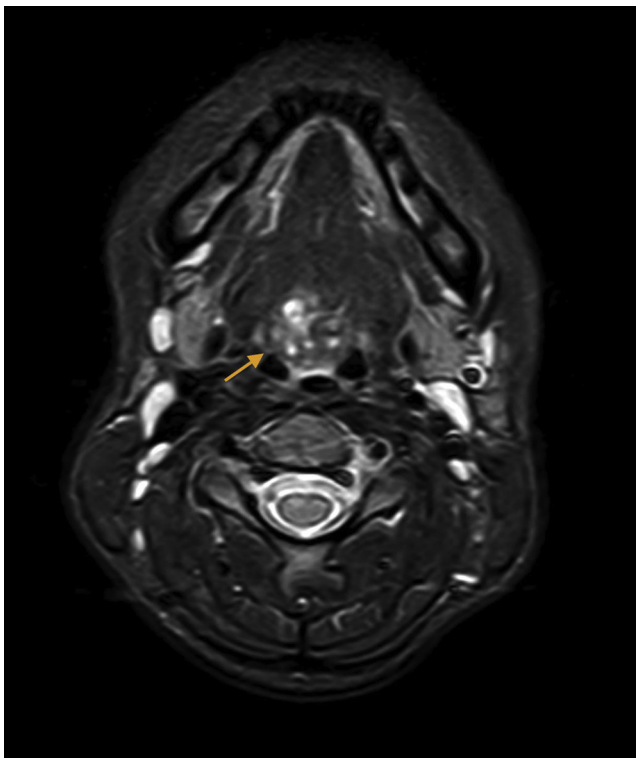

Fig. 2 – Magnetic resonance imaging T2 FAT SAT sequence on the axial plane showing thyroid tissue at the base of tongue (indicated by arrow).

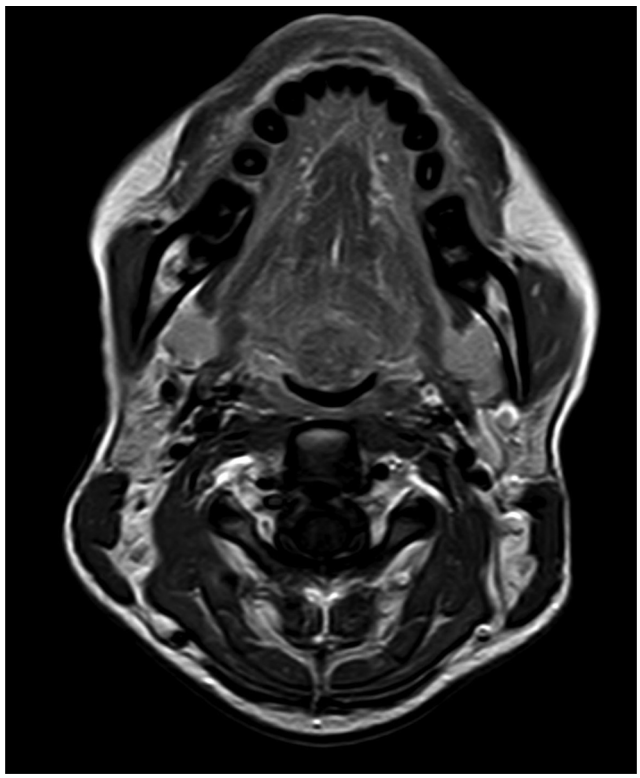

Fig. 4 – Magnetic resonance imaging T1-weighted after gadolinium sequence on the axial plane, showing homogeneous signal intensity of the whole tissue after gadolinium.