Lingual osseous choristoma

Lingual osseous choristoma has rarely been reported. Various theories have been proposed to better understand this unique condition, including branchial arch remnants, ossification of remnant thyroid, and metaplastic osseous differentiations.\(^1-3\) Here, we report a case of lingual osseous choristoma in a 15-year-old asymptomatic patient successfully treated with surgical excision.

A 15-year-old boy came to our department with complaints of intermittent "lump-in-throat" sensations. A 0.5 \(\times\) 0.5 cm mass on the dorsum of his tongue, approximately 1 cm to the left to the foramen cecum, was found accidentally. No other significant symptoms and signs were noted. No significant history was recorded. The mass was hard and nonelastic and well demarcated, and the overlying mucosa appeared to be normal. Surgical excision was performed transorally and the procedure was uneventful.

Histologic examination showed a cystic space containing one white and hard nodule measuring 0.5 \(\times\) 0.5 \(\times\) 0.3 cm in size (Fig. 1). Microscopically, it appeared to be an osteoma composed of mature lamellar bone. The cystic space was surrounded by fibrovascular tissue and overlying squamous epithelium. No thyroid tissue was observed in the specimen.

To the best of our knowledge, our case is the youngest male to be reported in the related literature as having lingual osseous choristoma. Since the first case reported by Monserrat in 1913, many theories have been proposed regarding the pathogenesis of this lesion. These theories can be divided into two main categories: the developmental theory and the reactive or posttraumatic theory.\(^4\)

The developmental theory suggests that these lesions are derived from the mesenchymal primordial cells or branchial arch remnants. The union between the anterior two-thirds...
of the tongue (first branchial arch) and the posterior one-third tongue (third branchial arch) takes place at the foramen cecum, the area where lingual osseous choristomas were most often reported. Bony structures could arise from both arches and this possibly explains the formations of lingual osseous choristoma. Moreover, the foramen cecum is the site where the thyroid arises and descends and it is suggested that the ossification of the undescended thyroid remnants might develop a lingual osseous choristoma. The post-traumatic theory suggests that a lingual osseous choristoma can result in metaplastic osseous differentiation after mechanical injury and that it acts in a manner similar to that of post-traumatic myositis ossificans and dystrophic calcification.\textsuperscript{2,5} There is a fourfold female predominance; however, the etiology of this phenomenon remains unclear.\textsuperscript{5} While reviewing the work by Vered et al\textsuperscript{4} and the following literature to date, we have found that the average age of patients with lingual osseous choristoma reported to be located precisely at the foramen cecum is 24.5 years, lower than the overall mean age at diagnosis reported in most other literature.\textsuperscript{1,4,5} This finding might reveal that the entity of lingual osseous choristoma represents a heterogeneous group of lesions and no single theory or mechanism can explain this rare lesion at this time.

References


Yi-Zhi Lin
\textit{Department of Otolaryngology, Taipei Medical University Hospital, Taipei, Taiwan}

Chao-Ho Hung
\textit{Department of Dentistry, School of Dentistry, National Taiwan University, Taipei, Taiwan}

Department of Dentistry, Shin-Kong Memorial Hospital, Taipei, Taiwan

Shih-Han Hung*
\textit{Department of Otolaryngology, Taipei Medical University Hospital, Taipei, Taiwan}

Department of Otolaryngology, School of Medicine, Taipei Medical University, Taipei, Taiwan

*Corresponding author. Department of Otolaryngology, Taipei Medical University Hospital, Number 252, Wu-Hsing Street, Taipei City 110, Taiwan.
\textit{E-mail address: seedturtle@gmail.com}

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