

## **Case 8051**

### **Oral cavity cystic lesion**

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**Section:** Head & Neck Imaging

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**Patient:** 31 year(s), male

### **Clinical History**

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A 31-year-old male patient complained of a painless bulge in the floor of the mouth. A palpable smooth mass was noted in the oral floor during physical examination. CT revealed a homogenous, non-enhancing 3.4 cm cyst located in the anterior part of the tongue, between the genihyoid muscles.

### **Imaging Findings**

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A 31-year-old male patient consulted his referring physician with complaints of a painless bulge in the oral floor. He did not suffer from dysphagia and had no history of trauma to the face or neck region.

Physical examination revealed a palpable smooth mass in the midline of the oral floor, with fluctuation. There were no associated skin changes at inspection and oral examination revealed no mucosal changes either.

Computer Tomography showed a homogenous oval mass located in the oral cavity, in the midline of the anterior portion of the tongue, between the genioglossus muscles, apparently above the mylohyoid and geniomyoid muscles. It measured 3.4 cm x 1.5 cm of greater axial diameters and had soft tissue attenuation in the pre-contrast images, with no visible calcifications. The lesion did not enhance after IV contrast, corresponding to a high-density cyst. No other abnormalities were found, namely lymphadenopathies.

Surgical excision was performed and histologic analysis revealed an epidermoid cyst of the oral cavity.

## Discussion

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Dermoid cyst is a term generally employed to include epidermoid, true dermoid and teratoid cysts [2].

An epidermoid cyst consists of simple squamous epithelium with a fibrous wall. The dermoid cyst has, in addition, a variable number of skin appendages, such as hair follicles and sebaceous glands. The teratoid cyst may contain diverse tissue types such as respiratory, nervous, and gastrointestinal tissues [1].

Epidermoid and dermoid cysts are rare benign tumours which may occur anywhere in the body. About 7% of them are found in the head and neck region and only 1.6% are located within the oral cavity [4], usually in the anterior part of the tongue or floor of the mouth [1, 2]. Although typically originated in the midline, they may extend laterally and downward as they grow [2].

Epidermoid and dermoid cysts may be classified as submental or sublingual based on their location in relation to the mylohyoid muscle [5], although some have presented as pedunculated, both submental and sublingual lesions, piercing it [1, 5].

They typically come to clinical attention during the second or third decade of life but are thought to have a congenital origin in most cases [1].

On imaging studies, they behave rather non-specifically, generally presenting as cystic lesions, occasionally containing areas of fat density. A clue to their diagnosis is the typical midline, anterior location within the oral cavity. They are too anterior to be a tyroglossal duct cyst and not lateral or inferior enough to be a ranula or a branchial cleft cyst [1, 2]. Other important differential diagnoses to be considered include lymphangioma, which is typically a multiloculated, more infiltrative lesion and abscess, which should show peripheral enhancement [2].

Treatment is surgical and location (submental vs sublingual) determines the surgical approach (intraoral vs cervical, respectively) [3]. Prognosis is excellent, as these are benign lesions with no known malignant potential [1].

## Final Diagnosis

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Epidermoid cyst of the oral cavity

## Figures

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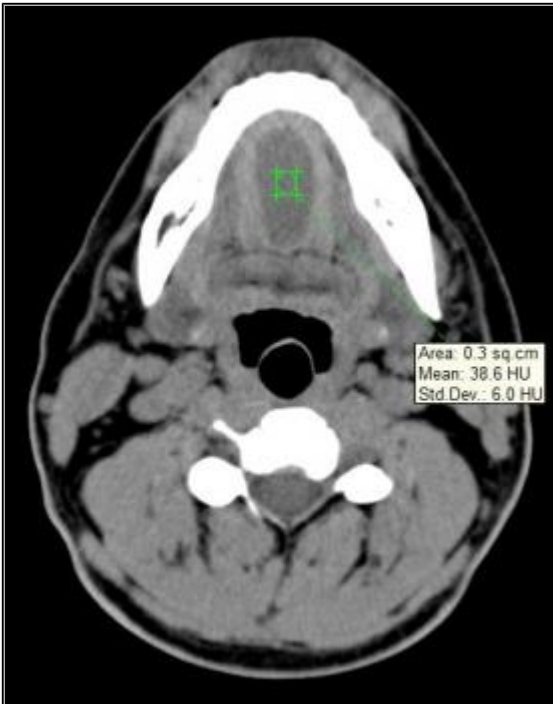
**Figure 1 Pre-contrast CT**





An oval hypoattenuating 3,4 cm mass was noted in the midline of the anterior portion of the tongue, between the genioglossus muscles.

**Figure 2 Pre-contrast CT**



Attenuation values found in the pre-contrast images were about 38 HU.

**Figure 3 Post-contrast CT**





The mass did not enhance after IV contrast.

**Figure 4 Post-contrast CT**



Post-contrast attenuation values were similar to those found in the pre-contrast images.

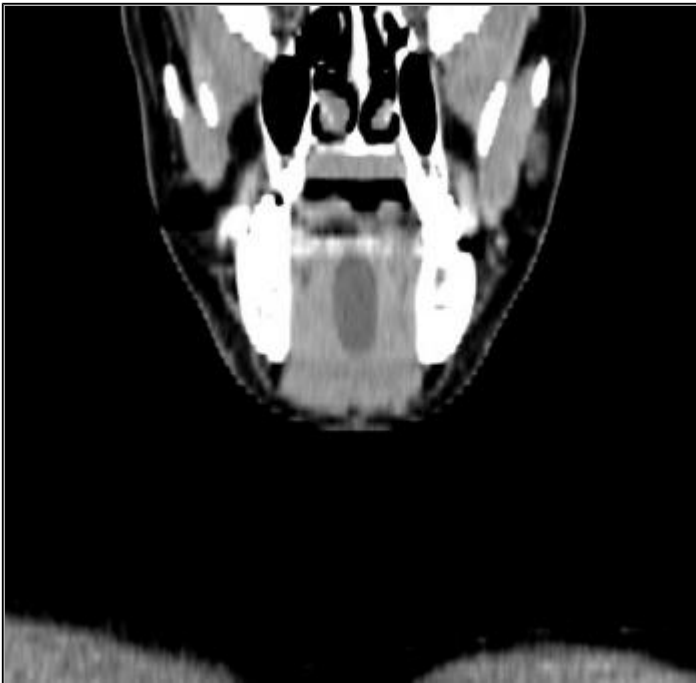
**Figure 5 Sagittal MPR**





The lesion had a rounded appearance in the sagittal plane and was clearly located above the geniohyoid and milohyoid muscles.

**Figure 6 Coronal MPR**



The mass was oval and elongated in the coronal plane.

**MeSH**

**Tongue** [A03.556.500.885]

**Tongue Neoplasms** [C07.465.565.925]

Tumors or cancer of the TONGUE.

**Epidermal Cyst** [C04.182.254]

Intradermal or subcutaneous saclike structure, the wall of which is stratified epithelium containing keratohyalin granules.

**References**

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- [4] Turetschek K et al (1995) Epidermoid cyst of the floor of the mouth: diagnostic imaging by sonography, computed tomography and magnetic resonance imaging. British Journal of Radiology 68:205-207
- [5] Ikeda K et al (2007) Hourglass-shaped sublingual dermoid cyst: MRI features. Radiol Med 25:306-308

**Citation**

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