

## A Rare Occurrence of Tongue Swelling- Case report

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### Abstract

Tongue swellings present a rare entity with a varied differential diagnosis. Acute tongue swelling is a life-threatening clinical entity as it may rapidly occlude the airway. The most common cause of tongue swelling is direct trauma or a foreign body although immunocompromised state is a predisposing risk factor. Herein we present a case report of a 45 year old patient who presented with a tongue swelling since five days.

**Keywords:** Tongue Swelling; Tongue Abscess; Foreign Body

### Introduction

Tongue Abscess is an acute inflammatory condition which is uncommon. It is one of the causes of acute swellings of the tongue and although most of the abscesses involving anterior two thirds of the tongue are not severe and difficult to diagnose, those involving posterior one third may obstruct the upper airway and constitute a clinical challenge [1]. However, if infected it has potentially fatal complications like brain abscess. Therefore, it is imperative to diagnose the condition appropriately. Fine needle aspiration cytology (FNAC) of the tongue swelling may be a useful diagnostic as well as a therapeutic tool. Tongue abscess should be considered, in all cases of acute swelling in the tongue [2].

### Case Report

A medically fit 45-year-old male presented with a five-day history of progressive left sided tongue swelling and pain to the dental out patient department. He additionally had difficulty in speech and swallowing food. Patient had history of rise in temperature and chills three days back with no history of trauma, sore throat or vomiting. No prior oral infections or recent illnesses was recorded. He had not taken any medications and had no known allergies. On examination, a soft and exquisitely tender swelling on the left side of the tongue was observed anteroposteriorly from the tip of the tongue to the posterior border of the tongue (Figure A). The tongue was not erythematous and no external lesions were present. Dentition was normal with no dental infections evident and no signs of infection in oropharynx and tonsil. On palpation, an elevated area along the left lateral border of the tongue with slight induration revealed pus (Figure B). Needle aspiration was done which showed pus collection (Figure C). A cellular smear study of the pus revealed inflammatory cells. Incisional biopsy was done, sutures were placed and a course of antibiotics Tab Taxim and Tab Metonidazole was started. Biopsy gave a histological picture of hyperplastic stratified squamous epithelium and formation of microabscess around a hyaline foreign body with exuberant granulation tissue formation suggestive of Foreign Body Granuloma (Figure D). In outpatient follow-up after ten days, the patient had complete resolution of tongue abscess with no residual sequelae (Figure E).



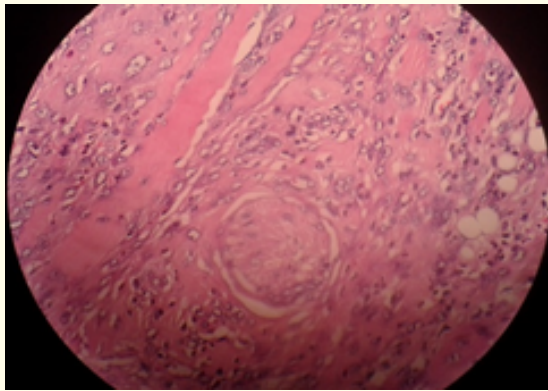
**Figure A:** Swelling on the left side of the tongue.



**Figure B:** Pus discharge on palpation.



**Figure C:** Fine needle aspiration of Pus.



**Figure D:** Histopathology showing Foreign Body granuloma.



**Figure E:** Follow up shows complete healing with no sequelae.

### Discussion

Tongue abscess or acute suppurative glossitis is a rare clinical entity found on the tongue which is usually unilateral. It can occur at any age groups but common between 30 and 50 years old, with no sex predilection.

The tongue is generally immune to infections due to several factors: (a) Constant mobility of tongue producing a cleansing effect (b) Thick keratinized mucosa that resists penetration by microorganisms (c) Bulky muscle tissue (d) Rich vascular supply and lymphatic drainage (e) Immunological properties of saliva [3].

The etiological factors for abscess on surface of tongue include trauma from ragged or caries teeth, ill-fitting dentures, biting or due to foreign body such as fish bone, etc. Others include acute parenchymatous glossitis, infected circumvallate papillae, upper respiratory tract infections and immunodeficiency states [2,3].

Clinically the patient may complain of sudden rise in temperature associated with chills, generalized discomfort, painful swallowing and salivation which was seen in our reported case. Sometimes the patient presents with referred pain to the jaws and to the ears, due to involvement of the chorda tympani nerve. Occasionally it may also affect speech and breathing. Dyspnea and dysphagia are serious complications that calls for emergency attention [4]. Our case had symptoms of fullness of mouth, slurred speech and dysphagia.

Complications include edema of the glottis, suffocation, hemorrhage, descending infections into the mediastinum, lungs and pericardium or brain abscess which can be quite dreadful but were absent in our case [5]. Fine needle aspiration is a simple and an easy diagnostic and therapeutic tool [2]. Microbiological examination of aspirated pus may be helpful in isolating the organism. However other diagnostic modalities include ultrasonogram (USG), computed tomography (CT) or magnetic resonance imaging (MRI) which may be useful in complicated cases to detect the spread of the lesion and to rule out malignancy in suspected cases [1]. The ultrasonography defines and differentiates cystic structures, vascularized and abscesses but in the tongue, there is a difficulty for the use of the transducer. The computed tomography allows definition and anatomical relation of the lesion mostly in the posterior third of the tongue. The MRI allows a better visualization of soft tissue and avoids artifacts of the jaw and dental amalgam [6].

The differential diagnosis of sudden acute tongue swelling (acute macroglossia) includes acute hemorrhage, edema, infarction or a hematoma. The tongue is richly supplied with lingual artery and its branches, so prone for hemorrhage and hematoma formation. Bleeding can also occur due to vascular malformation or hemorrhagic disorders. Acute edema may precede allergy or angioedema due to insect bite whereas acute ischemic necrosis (infarction) is unusual and may occur as a complication of giant cell arteritis [7]. Ludwig's angina, lingual artery aneurysm and lingual tonsillitis are some of the other differentials. The differentials for tongue abscess also include acute epiglottitis, infected lingual dermoid or epidermoid tumors, cystic lesions and lymphoma [8]. Macroglossia due to hypopituitarism, metabolic alterations as deficiency of vitamin B12, hypothyroidism, amyloidosis, acromegaly, iron deficiency, also must be considered as differential diagnosis [9]. Cornerstone of treatment is drainage of abscesses with adjunctive antimicrobial therapy and removal of infected foreign materials, which is of critical importance for recovery. Antibiotic selection should cover oral flora. Attention to airway is critical, and admission to an intensive care unit for close observation may be necessary [10,11].

### Conclusion

Tongue abscess though rarely encountered, can be life-threatening if neglected. A rapidly developing airway problem secondary to a sudden exacerbation of wound infection in the tongue is a serious sequela. A detailed history, thorough exam, soft tissue radiographs and patient cooperation are necessary for correct diagnosis and treatment.

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