



Abscess of the Tongue Evolution and Treatment of an Emergency

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Abstract

The Authors present a rare case of abscess of the tongue in a 86-years-old man suffering of severe odynophagia and dysphagia, increased snoring and tongue swelling for 15 days. A contrast-enhanced computed tomography scan (CT scan) of the neck was performed disclosing a 4.2 x 3.2 x 3.8 cm sized abscess at the 2/3 posterior of the body of the tongue. Due the general conditions of the patient needle aspiration through the oral route was made consecutively for three days. The patient experienced considerable amelioration of the symptoms. A CT scan of the neck in the 5th day after the conservative treatment revealed an initial extension of the abscess into the hypo-pharyngeal space. General anaesthesia and endotracheal intubation were required. Incision and drainage of the abscesses were performed using diode laser. Tracheotomy was necessary. Complete regression of the symptoms was experienced after 10 days.

Keywords: Abscess; Tongue; CT scan

Introduction

Abscess of the tongue is a rare pathology reported only once in the English Literature [1]. These Authors reported lingual tonsil abscess pointing out the similar structure to that of the palatine tonsils. However the different progression of infection is not similar because lingual tonsil lack the capsule, thus preventing the formation of a peritonsillar abscess [1].

Acute lingual abscess is life-threatening clinical entity, as swelling of the tongue may rapidly occlude the airway [2]. Symptoms are progressive pain, fever, swollen and immobilization of the tongue, oedema and redness of the tongue. The most common cause of lingual abscess is direct trauma, although immunocompromised state is a predisposing risk factor [3]. The brisk vascularisation and muscularity of the tongue and anti-infective properties of saliva are preventing factors to the development of the abscess [4].

Diagnosis of abscess of the tongue required enhanced Computed Tomography (CT scan) of the neck, Ultrasound (US) through floor of mouth or Magnetic Resonance Imaging (MRI). Despite of the rarity and complexity of the condition its management strategy is relatively simple [5]. Intravenous antibiotics are the primary treatment modality, with consideration given to adjunctive surgical drainage [3]. Differential diagnosis of the tongue abscess include haemorrhage, infarction, tumor and edema [5].

The Authors describe a rare case of abscess of the tongue in a 86-years-old man treated initially with conservative procedure because his general conditions; after initial ameliorations of the symptoms patient underwent to general anaesthesia 5 days later for the extension of the abscess into the hypo-pharyngeal space.

Case Presentation

A 86-years-old man was urgently referred to ENT department with complaints of severe odynophagia and dysphagia to solid and liquid foods for 15 days, treated with two different antibiotics without resolution of the symptoms. Tongue swelling, voice changes and increased snoring were progressively experienced. He was afebrile with normal vital signs. The white blood cell count was 16.49/mm³, C-reactive protein was 3.15 mg/L. He had no history of smoking, alcohol consumption. The patient was affected by chronic bronchitis, atrial fibrillation treated with Warfarin and implant

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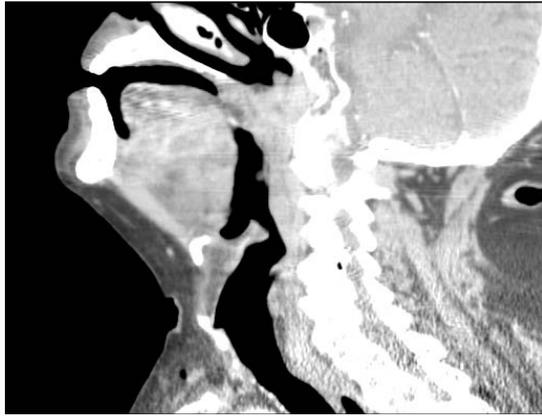


Figure 1: Sagittal CT scan of the neck disclosing abscess at the 2/3 posterior of the body of the tongue.



Figure 2: Sagittal CT scan of the neck performed in the 5th day after the conservative treatment. Extension of the abscess into the left hypopharyngeal space.

of Pace Maker. Progressive pain involving tongue and stomatolalia were the main symptoms. A flexible endoscopic examination revealed normal larynx with no signs of airway obstruction. Tonsils were normal. Large spectrum of intravenous antibiotic and corticosteroid were initially used. A contrast-enhanced Computed Tomography scan (CT scan) of the neck was performed disclosing a 4.2 x 3.2 x 3.8 cm sized abscess at the 2/3 posterior of the body of the tongue (Figure 1). Due to the general conditions of the patient needle aspiration of the pus collection through the oral route was made consecutively for three days. The patient experienced considerable amelioration of the symptoms. Pathologic examination of the pus revealed only flogistic cells. Unfortunately a CT scan of the neck in the 5th day after the conservative treatment revealed an initial extension of the abscess into the hypo-pharyngeal space (Figure 2). Thus patient underwent in the operating room. The general anaesthesia and endotracheal intubation were required. Incision and drainage of the hypo-pharyngeal abscess and the residual tongue lesion were performed using diode laser. Tracheotomy was necessary. The follow-up CT scan of the neck performed 10 days later the operation revealed complete disappearance of the two abscesses (Figure 3).

Discussion

The tongue is resistant to infection because many protective

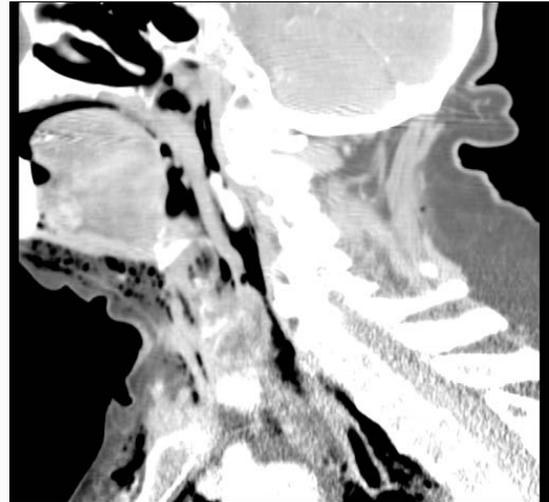


Figure 3: Sagittal CT scan of the neck after 10 days later the operation. Complete regression of the two abscesses.

mechanisms: the increased vascularisation and lymphatic drainage, thick keratinized mucosa, the immunological properties of saliva, and the constant mobility which reveals cleaning effect of saliva [6]. The tongue abscesses are classified in two groups: anterior tongue abscess and posterior third abscess [7]. The etiologies vary according to its localization. Posterior abscess usually derived from lingual tonsillitis, infected thyroglossal duct cyst remnants, and periodontal infections spreading from lower molar teeth [6,8]. Recurrent tongue abscess were referred in case of diabetes and tongue laceration [9]. Tajudeen et al. [10] report a case of glossal abscess as a complication of tongue-base suspension surgery for the treatment of obstructive sleep apnea (2011). In careful retrospective history taking, the symptoms had dated from an episode of trauma [3,11-13].

The symptoms of tongue abscess are painful swelling of the tongue, pain, fever, dysphagia and dyspnea. Differential diagnosis includes: carcinomas, acute epiglottitis, dermoid cyst, lingual artery aneurysm, infarction, haemorrhage, lingual tonsillitis, thyroglossal cysts, tuberculosis and actinomycosis [14]. Laboratory and radiological tests may be helpful. CT scan and MRI are recommended for differential diagnosis of tongue swelling [9,7].

Approximately 60 cases of tongue abscess have been reported in the English-language Literature over the past 30 years [10]. Treatment of abscess of the tongue consists of airway maintenance, abscess drainage, antibiotic treatment [7]. Drainage of the abscess is usually done by needle aspiration of the pus through the inferior surface of the tongue [15]. Gulsum et al. drained successfully the abscess of the base of the tongue through the oral route by needle aspiration for five consecutive days.

In our experience the abscess of the tongue was drained through the oral cavity by needle aspiration for 3 consecutive days. The patient experienced sensible amelioration of the symptoms. Unfortunately a CT scan 5 days later showed initial extension of the abscess into the hypo-pharyngeal space. Incision and drainage in the operating room was necessary. Diode laser assisted drainage of hypo-pharyngeal abscess and the residual tongue lesion were performed. A tracheotomy was necessary to avoid airway compromise.

Conclusion

The tongue abscesses are rare but potentially life-threatening pathologies. The case report in this paper increase awareness among

head and neck surgeons of the clinical findings of this acute pathology. The Authors consider conservative treatment the first choice leaving operative surgery in general anaesthesia in the cases of complications such as described in this issue.

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