

CASE REPORT

Actinomycosis of The Tongue:A Diagnostic Dilemma

Aniece Chowdary, Anirudh Kaul, Surinder Atri*

Abstract

Actinomycosis is a bacterial, suppurative chronic infectious disease caused by *Actinomyces israelii*. Actinomycotic infections of the cervicofacial region are not uncommon, however Actinomycosis of tongue is rare. A mass that may mimic both benign and malignant neoplasms can be seen at clinical presentation and may mislead the diagnosis. We report a patient who presented with a tumor like tongue mass causing speech disturbance and difficulty in swallowing, diagnosed as actinomycosis

Key Words

Actinomycosis, Tongue Mass

Introduction

Actinomycosis are prominent among the normal micro flora of the oral cavity but less prominent in the lower gastrointestinal tract and female genital tract. As these microorganisms are not virulent, they require a break in the integrity of the mucous membranes and the presence of the devitalized tissue to invade deeper body structures and cause human illness. The clinical manifestations are in the three areas: cervical (50%), thoracic(17%) and abdominal (23%).The most common is cervico-facial, in the shape of mass adjacent to mandible conceding with dental manipulation or maxillofacioal trauma (1). Actinomycosis is a bacterial, suppurative chronic infectious disease caused by *Actinomyces israelii*. Actinomycotic infections of the cervicofacial region are not uncommon, however actinomycosis of tongue is rare. A mass that may mimic both benign and malignant neoplasms can be seen at clinical presentation and may mislead the diagnosis (2-4). We report a patient who presented with a tumor like tongue mass causing speech disturbance and difficulty in swallowing, diagnosed as actinomycosis

Case Report

A 45 yr old woman was admitted with localized nodular swelling over right lateral boarder of tongue. The nodule measuring 2x1.5x1 cm's which was hard in consistency & slightly reddish in colour (*Fig 1*). It had been there for one month and its development was gradual since then. The swelling was subjected to FNAC many times before admission to this hospital and all the times it was reported as benign lesion/ abscess. In view of location of tongue mass,hard consistency, absence of palpable neck lymph nodes and inconclusive FNAC report, patient was taken



Fig1. Patient Showing Operation Site After Surgery

From the Department of ENT and Head Neck Surgery & *Pathology SMGS Hospital GMC Jammu J&K India

Correspondence to :Dr Aniece Chowdary, Professor and Head, Department of ENT and Head Neck Surgery SMGS Hospital GMC Jammu

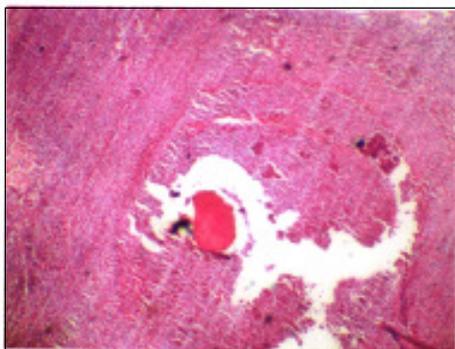


Fig 2 & 3. Microscopic View Demonstrating the Large Collections of Polymorphonuclear Leukocytes (PMN) as Well as the Bacterial Colony (BC). The Basophilic Central Core and the Eosinophilic Peripheral Portion of the Colonies are also Apparent (H&E, Original Magnification x 40 and X 100 Respectively

up for excision biopsy under general anaesthesia. The tongue swelling was excised and sent for histopathological examination and diagnosis of actinomycosis was made (Fig-2&3). Patient was treated with antibiotics post operatively & was discharged from the hospital in a satisfactory condition.

Discussion

The term actinomycosis is misleading as some believe that actinomycosis is a fungal infection, although it is not. Actino referred to the radiating organism in the sulfur granule as ray fungus. Human actinomycosis was first described in the medical literature in 1857. In 1877, Bollinger found *Actinomyces bovis* in granules from cattle with a condition called lumpy jaw. In 1878, Israel discovered granules in human autopsy material and described actinomycosis in humans in 1885. Actinomycosis can rightly be called the "masquerader" of the head and neck. Because its symptoms are vague and non specific, its diagnosis can be delayed until a vital organ becomes eroded or obstructed. It is a commensal saprophyte often found in the oral mucus, teeth cavities and the tonsillar crypts, especially in cases of bad hygiene, and also in the respiratory and digestive tract. In order to become pathogenic, they need a microenvironment that is favourable to them in competition with other bacteria and possibly the area which has been previously ulcerated. In fact, there is often a previous history of trauma to the tongue.

Cytologically, the bacteria is identified by their growth pattern in colonies made up of dense masses of hematoxylin-stained, tangled filaments that radiate outward

and tend to be eosinophilic at the periphery (5). The polymerase chain reaction (PCR) technique has been developed for the diagnosis of actinomycosis.

Surgery plays a role in diagnosis and treatment of Actinomycosis. Penicillin is the treatment of choice; tetracycline and erythromycin are given to patients allergic to penicillin. In acute phase penicillins can be replaced by cephalosporins.

Conclusion

Actinomycotic infections of the cervicofacial region are not uncommon, however actinomycosis of tongue is rare. A mass that may mimic both benign and malignant neoplasms can be seen at clinical presentation and may mislead the diagnosis. Thus, it should also be kept as one of the differential diagnosis.

References

1. Habibi A, Salehinejad J, Saghafi S, Mellati E, Habibi M. Actinomycosis of the tongue. *Arch Iran Med* 2008; 11(5):566-68
2. Atespare A, Keskin G, Eric C, Keskin M, Camcioglu A. Actinomycosis of the Tongue: a diagnostic dilemma. *J Laryngol Otol* 2006; 120(8):681-83
3. Lahoz Zamarro MT, Laguia Perez M, Muniesa Soriano JA, Martinez Sanz G. Base Tongue Actinomycosis. *Acta Otorrinolaringol Esp* 2005; 56(5):222-25
4. Ficcaro G, Di Lollo S, Pierleoni F, Panzoni E. Actinomycosis of the Tongue: a diagnostic challenge. *Head Neck* 1993; 15(1): 53-55
5. Patel KB, Gupta G, Shah M, Patel P. Pulmonary actinomycosis in fine needle aspiration cytology. *J Cytol* 2009; 26(2): 94-96