ACTINOMYCOSIS OF FAUCIAL TONSIL MASQUERADING AS OROPHARYNGEAL MALIGNANCY

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ABSTRACT: *Actinomycosis is a rare inflammatory disease caused by anaerobic gram negative bacterium of actinomyces species. Lesions in the head and neck are characterized by their varied presentation and their propensity to mimic other diseases.[1] Here we present a rare case report of actinomycosis of tonsil in an elderly man masquerading as tumour of oropharynx.*

Key Words: *Actinomycosis, tonsils, oropharyngeal malignancy*

INTRODUCTION

Actinomycosis is a chronic suppurative bacterial disease caused by branching filamentous gram-positive bacilli of actinomycosis family. The disease is characterized by spread to contiguous tissues because of disruption of anatomical barriers by trauma, surgery or another infection. Once in the tissues, it may form an abscess that develops into a hard red to reddish purple lump. When the abscess breaks through the skin, it forms pus-discharging lesions.[2] Actinomycosis infections of the head and neck, although fairly uncommon, represents an important entity because of its varied presentation that may mimic other common diseases, the difficulties involved in its diagnosis, and the long course of treatment mandatory to eradicate the disease.

CASE REPORT

60-year-old male presented with history of throat pain of 1 year duration. He also complained of difficulty and pain during swallowing which was progressive in nature. He gave history of left ear pain since the past 10 days. He also complained of progressive loss of weight. Patient is a known smoker and alcoholic for the past 30 years.

On examination patient was under nourished. Nicotine stains were present over the teeth. Ulcero-proliferative growth was seen in both the tonsils covered with slough. The growth had an irregular surface and it was bleeding on touch. Uvula was edematous. [Figure 1] Neck examination revealed 2x2 cm smooth, firm, non-tender, fixed, jugulo-digastric lymph node on both sides. Ear, laryngeal and nasopharyngeal examinations were clinically normal. Mobility of palatopharyngeal arches was restricted. CT scan of oropharynx did not reveal any significant finding. MRI was contemplated after histopathological diagnosis.

Patient was investigated. Biopsy of the tonsillar growth from both sides were done under local anesthesia and sent for histopathological examination. Histopathological examination revealed an inflammatory lesion with filamentous gram positive colonies suggestive of actinomycosis, which was

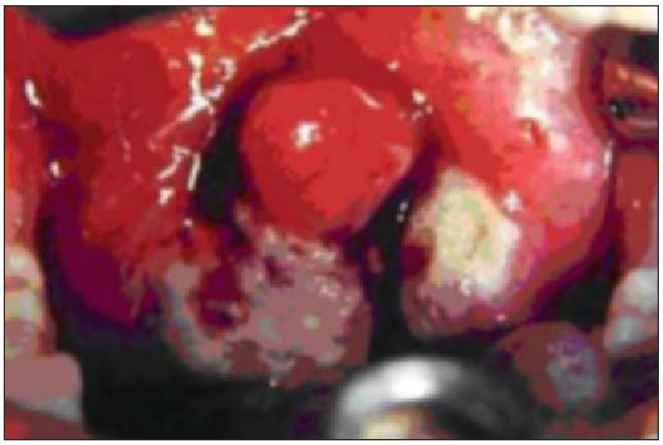

Figure 1: Ulcero-proliferative growth of both tonsils covered with slough

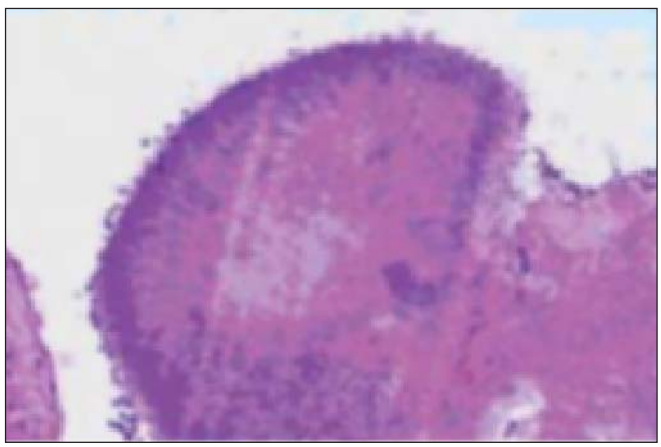

Figure 2: high power view showing actinomyces colony (H/E, 100x)

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verified by 2 other pathologists independently to obviate the observer bias. [Figure 2]

Patient was treated with Penicillin-G 10 million units IV for four weeks followed by amoxycillin 500 mg three times a day for four months. Patient is on regular follow-up. Patient has improved clinically and symptomatically.

DISCUSSION

The first reported case of human infection with actinomycosis was reported by Von Langenbeck in 1845 and was attributed to a fungus. Bollinger in 1876 gave the name "lumpy jaw disease" because of its presentation in cattle. Harz, in 1877, named the infecting organism actinomyces, which means ray fungus, reflecting the belief at the time that the organism was a fungus. Israel and Ponfick delineated the anaerobic nature of actinomyces and isolated it from humans in 1891. In the 1960's Waksman showed that actinomyces was actually a gram-positive bacteria.[3]

Since their proper identification in the 1960's, five species have been identified A israelli, A bovis, A naeslundii, A viscosus and A odontolyticus. These organisms are members of the family Actinomycetaceae, Streptomycetaceae and Actinoplanaceae. They are gram-positive rods, which are strict or facultative anaerobes.[3] Except for A bovis, all the species are normal inhabitants of the human oral cavity. Precipitating factors believed to lead to disease in the cervical facial region include dental caries, dental manipulations and maxillofacial trauma.[1] Pathogenesis is related to its ability to act as an intracellular parasite and thus resist phagocytosis as well as its tendency to spread without respect for established tissue plains or anatomic barriers. It commonly occurs in 4th to 6th decade.

Cope, in 1938, classified actinomycosis infection into three distinct forms.[1]

1. The cervicofacial (50%)
2. The pulmonothoracic (30%)
3. The abdominopelvic (20%).

In the cervicofacial region, the infection usually presents as a mass adjacent to the mandible, which may be tender on palpation, associated with surrounding induration or erythema, and may present with fever in up to 50% of cases. Involvement of the skin of the cheek is the next most common presentation. The classic formation of draining sinus tracts with the presence of sulfur granules is seen in approximately 40% of cases and, when present, can help make the diagnosis.[4] Other manifestations include involvement of the temporal bone and middle ear, larynx, tonsil, hard palate, parotid gland, nasopharynx, lacrimal duct, tongue and orbit.[5-7]

Our patient was a 60 year old male smoker and alcoholic who presented with progressive dysphagia. Examination revealed an ulcero proliferative growth involving both the tonsil which was bleeding on touch. Both the history and clinical features were more in favour of oropharyngeal malignancy.

Actinomycotic infection has been reported in a small percentage of people presenting with chronic tonsillitis.[8] Data about the presence of actinomycotic granules in tonsillar crypts are controversial in the available literature sources. Clinical significance of actinomyces in the tonsil is considered to be simple saprophytism by some, whereas it is considered infective for the tonsillar tissue by others.[9,10] In a study of 1820 tonsillectomies actinomyces was found in 6.7% of cases. There was no correlation between the clinical diagnosis of tonsillar disease and the presence of actinomycosis however cyptitis can be considered a histopathologic indicator for tonsillar actinomycosis.[11]

For the diagnosis of actinomycosis to be established, two of the following conditions must be present, positive cultures, sulfur granules or biopsy specimens showing the organism. The typical findings include the presence of sulfur granules seen as basophilic masses with a granular center and a radiating fringe of club-shaped protrusions as well as the distinctive filamentous and beaded actinomyces.[12]

The current recommended therapy includes 4 weeks of high dose IV Penicillin followed by a 3 to 6 month course of oral Penicillin, continuing treatment even after total resolution of symptoms. Other antimicrobials that have been found to be effective include tetracycline, erythromycin and clindamycin. These can be used in Penicillin-allergic patients with good success rates. Ciprofloxacin has been used for treatment of recalcitrant cases.[12]

CONCLUSION

Actinomycosis of the head and neck region is an important entity because of its role as the "great masquerader" of the head and neck lesions. It can masquerade any oropharyngeal malignancies or can mimic any other common lesions in oropharynx. Lesions in head and neck region that do not respond for common antibiotic therapy may arouse suspicion of actinomycosis. Proper recognition and diagnosis is important because of the long term therapy needed to successfully treat the infection. Advances is clinical pathology have made its diagnosis easier and less invasive. High index of suspicion is still needed for correct diagnosis, to avoid dilemma and unnecessary investigations pursued to arrive at a diagnosis and to institute timely and appropriate effective therapy.

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ORBITAL APEX SYNDROME DUE TO MUCORMYCOSIS CAUSED BY RHIZOPUS MICROSPORUM

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ABSTRACT: *The incidence of fungal rhino sinusitis has increased in recent years in a tropical country like India. A case of Orbital Apex Syndrome due to mucormycosis caused by Rhizopus microsporum fungus is reported in a 65 year old male diabetic patient. The disease though invasive with early diagnosis and treatment, has a good prognosis with a favorable outcome.*

Key Words: *Orbital apex, Mucormycosis*

INTRODUCTION

Fungal rhino sinusitis is being recognized and reported with increasing frequency over the last two decades worldwide. It occurs in two distinct forms - the fulminant invasive disease, which is predominantly seen in patients with some form of immunosuppression and the chronic fungal *rhino* sinusitis in apparently healthy hosts. Apart from the species of Aspergillus which is isolated from a majority of such cases, dematiaceous hyphomycetes, Pseuda llescheria boydii, candida, fusarium, hyalophamycetes and Zygomycetes are also reported. The changing terminology for mucommycosis and of its causative agents has complicated data retrieval and confused clinicians. All the agents of mucormycosis belong to the order Mucorales.

The classification of the Genera that contain the agents of mucormycosis in man is:
-Zyixomycetes (class)
Mucorales (order)
Mucorales order has six families.

Family	Genus
1. Cumninghama llaceae	Cunningahamella
2. Mortierellaceae	Mortierella
3. Mucoraceae	Rhizopus, Absidia, Rhizomucor, Mucor, Apophysomyces
4. Saksenaceae	Saksenaea
5. Syncephalastraceae	Syncephalastrum
6. Thamnidiaceae	Coke romyces.

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