(International Print/Online Journal)

SJIF IMPACT FACTOR: 4.617
PUBMED-National Library of Medicine ID-101739732

ISSN (Print): 2209-2870
ISSN (Online): 2209-2862

International Journal of Medical Science and Current Research (IJMSCR)
Available online at: www.ijmscr.com
Volume2, Issue 6, Page No: 333-336
November-December 2019

Hard palate actinomycotic nodule with reactive actinomycotic tonsillar lesion: A Case Report

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Type of Publication: A Case Report
Conflicts of Interest: Nil

ABSTRACT
Actinomycosis is a chronic suppurative bacterial disease caused by anaerobic gram-positive bacteria of actinomyces species. Actinomycosis, because of its varied presentation has a propensity to mimic other diseases. Here a rare case of intraoral actinomycotic lesion of hard palate with incidental tonsillar actinomycosis in a 25 years old female is presented.

Keywords: Hard palate, Actinomycosis, Sulphur granules, Splendore- Hoeppli material.

INTRODUCTION

Actinomycosis is caused by branching, filamentous gram-positive bacilli which results in chronic suppurative inflammatory disease. The organism is a commensal in human oral cavity [1]. The disease is characterized by disruption of anatomical barriers by trauma, surgery or other infections. In the tissue, it may form an abscess that develops into a hard red to reddish purple lump [2]. It spreads by burrowing through tissues as a result of direct contiguity without regard to anatomic structures. Eventually, sinus tracts develop through which yellowish purulent discharge and sulphur granules are released which have little tendency to heal [3]. In humans, approximately 60% of actinomycotic infections are cervicofacial [4]. Lesions in the oral cavity are rare and frequently involve the mandible, tongue, lips and oral mucosa [4, 5]. Actinomycosis is an important clinical entity because of its difficult diagnosis due to non- specific clinical and imaging findings that can mimic other diseases [6]. If left untreated, it involves the bone in 15% of the cases, with gradual cortical erosions, which give way to localized lytic bone destruction [3]. With this background of the rarity and severity of actinomycosis, a rare case of hard palate actinomycotic nodule with simultaneous saprophytic infection of tonsils in a 25 years old female is presented here.

CASE REPORT

A 25 years old unmarried female presented at the Ear, Nose, and Throat outpatient department with complaints of pain in throat and difficulty in swallowing for one year. She also complained of a swelling hard palate for 3 months which was progressively increasing in size. She gave history of recurrent sore throat. On examination, the patient was moderately nourished. Bilateral tonsils were enlarged. The hard palate swelling was reddish purple, firm and nodular. A small area of overlying mucosa was disrupted and covered with yellowish discharge (Fig. 1). Neck examination revealed 1.5x

1.5cm, firm, discrete, non- tender, mobile, jugulodigastric lymph nodes on both sides. CBC (Complete Blood Counts), ESR (Erythrocyte sedimentation rate), LFT (Liver function tests), KFT (Kidney function tests) were within normal limits. Ear, laryngeal and nasopharyngeal examinations were clinically normal. The clinical diagnosis was tonsillar hyperplasia with minor salivary gland neoplasm hard palate. FNAC of neck nodes and hard palate swelling were done. Neck nodes were found to be reactive on FNAC. The hard palate swelling was inconclusive on FNAC and revealed only blood. Tonsillectomy and excision of hard palate swelling was done. Histopathological examination of excised tonsils revealed lymphoid hyperplasia and colonies of actinomyces in the tonsillar crypts on H & E stain (Fig. 2a, 2b), Gomori methenamine silver (GMS) stain (Fig. 2c) and Periodic acid Schiffs (PAS) stain (Fig. 2d). The hard palate swelling revealed multiple actinomycotic colonies scattered in the subepithelial tissue (Fig. 3a, 3b, 3c). The patient received antibiotic therapy with penicillin G 2 lakh units IV 8 hourly for one week followed by amoxicillin 500mg three times a day for 4 months. The patient recovered and was kept on follow up.

DISCUSSION

Actinomyces are gram positive, non-acid fast, anaerobic or microaerophilic filamentous branched bacteria, living as commensals in the human oral cavity, respiratory and digestive tracts. They are very difficult to grow in culture, with < 30% of cultures being positive [1, 7]. In humans, the pathogenic actinomyces most frequently isolated is A. israelii, less commonly, infection is caused by A. propionica, A. naeslundi, A. viscosus and A. odontolyticus [7, 8, 9]. In cervicofacial actinomycosis, which is the most frequent manifestation, infection is frequently the result of oromaxillofacial trauma, dental manipulation or dental caries [10]. In the present case, the patient did come out with a history of oromaxillofacial trauma with a toothpick but it was only after histopathological examination of excised hard palate swelling. The source of infection in the present case could be actinomyces in the tonsils. Patient showed no signs of immunodeficiency. Various sites of cervicofacial actinomycosis have been described including the scalp, forehead, nose, paranasal sinuses, palate, parotid gland, temporal bone, lacrimal glands, minor salivary glands, cheeks, lower jaw, tongue, lips, larynx and the lower pharynx [1, 6, 10]. Patnayak et al [11] described reactive actinomycotic tonsillar lesion in a young male, Ratnaprabhu V et al [3] described palatal actinomycosis in a 5 years old male. Actinomycosis produces a massive fibrotic reaction surrounding the necrotic center of the lesion, and thus palpation often reveals a swelling of woody consistency [12]. Because the clinical symptoms are non- specific, actinomycosis can be misdiagnosed as tumor or other granulomatous disease [13, 14, 15] as happened in our case in which the initial diagnosis of hard palate swelling was minor salivary gland neoplasm. The strict anaerobic qualities of this microorganism may prevent growth and it is very difficult to obtain positive laboratory culture [4]. Even on appropriate anaerobic media recovery rates from culture are very less [14]. Due to difficulties in diagnosing actinomycosis, it is also referred to as a great masquerader with special reference to head and neck disease [6,15]. For a definite diagnosis, incisional biopsy and histopathological examination are necessary. Typical microscopic findings show an outer zone of granulation and a central zone with multiple granules representing colonies of actinomyces. Treatment consists of surgery and prolonged antibiotic therapy [6].

CONCLUSION

As actinomycosis is known as a “great masquerader” of head and neck lesions, high index of suspicion must be exercised for correct diagnosis to prevent complications and for timely and adequate treatment.

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FIGURES

Fig.1: Clinical photograph showing the hard palate swelling measuring 1.5x1.5cm, reddish purple, firm and nodular. A small area of overlying mucosa was disrupted and covered with yellowish discharge.

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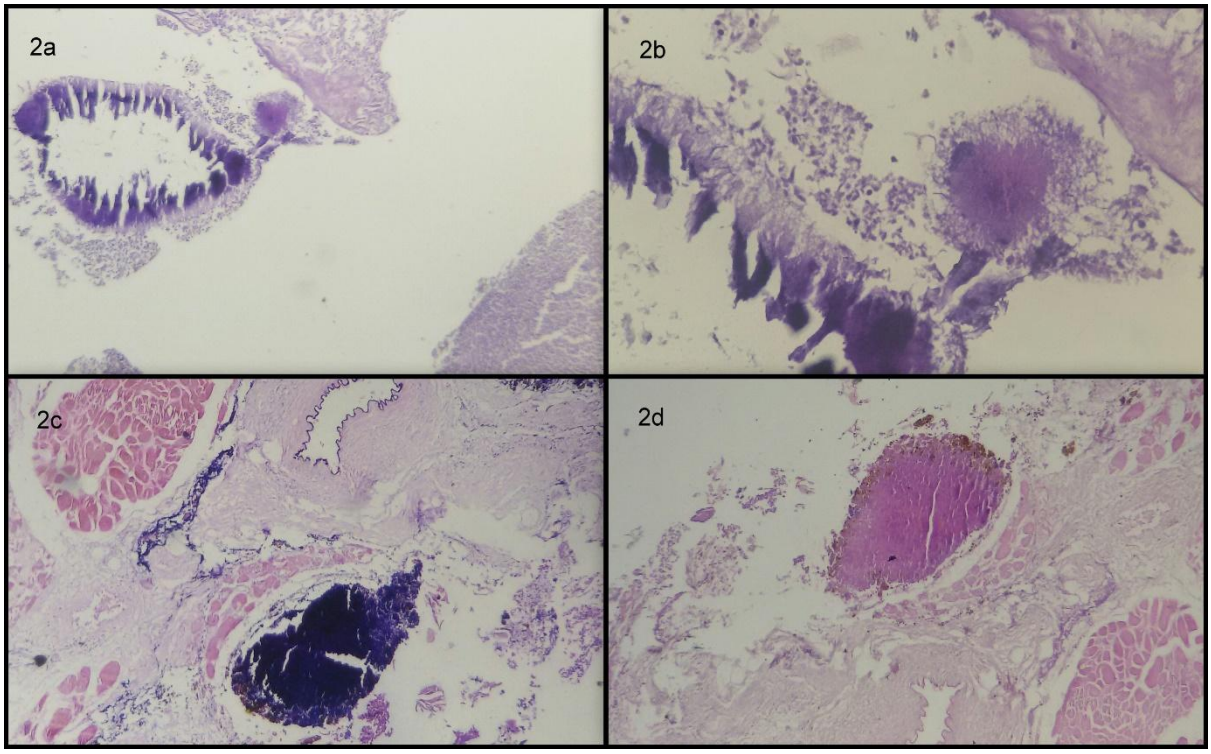

Fig. 2a: Microphotograph showing tonsillar hyperplasia and colonies of actinomyces in tonsillar crypts. (H&E; 200x), 2b;(H&E; 400x), 2c; (GMS; 200x), 2d; (PAS; 200x).

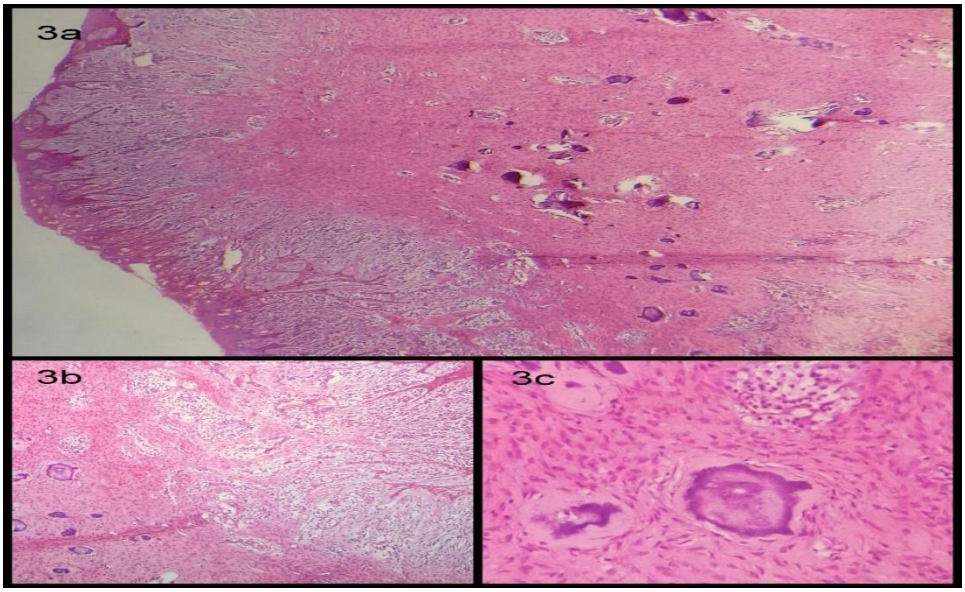

Fig. 3a: Microphotograph showing multiple actinomycotic colonies scattered in the subepithelial tissue. (H&E; 100x), 3b; (H&E; 200x), 3c; Actinomycotic colonies revealing organized aggregates of filaments, bordered by eosinophilic, club like, Splendore- Hoeppli material. (H&E; 400x)

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