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CASE REPORT

Necrotizing Sialometaplasia – A rare benign lesion of minor salivary gland

Shubhi Maheshwari [1], G.V Ramachandra Reddy[2], Poorva Saxena [3], Sadiya Tarannum [4], Swati Surushe [5]

[1,4,5] Post Graduate student, Department of Oral Medicine & Radiology, People's Dental Academy, People's University
[2] Professor & Head of the Department, Department of Oral Medicine & Radiology, Peoples Dental Academy, Peoples University
[3] MDS

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ABSTRACT

Necrotizing sialometaplasia is a self-limiting benign disease of minor salivary gland. it is a rare entity mostly affect the minor salivary gland of hard palate. The lesion is believed to cause by the trauma which leads to vascular ischemia of salivary gland lobules. Simple incisional biopsy is required to confirm the histological diagnosis and to rule out more serious disease processes. We report a case of acute necrotizing sialometaplasia in a 34yr old male patient. This paper highlights the importance of detailed history and treatment planning.

Keywords: Necrotizing sialometaplasia, Salivary gland, Palate, Benign lesion

Introduction

Necrotizing sialometaplasia (NSM) is an inflammatory and reactive lesion. Also known as salivary gland infarction. It was first described by Abrams et al in year 1973.It is a non- neoplastic, self-limiting inflammatory condition of the minor salivary glands with male predilection. Average age reported is 46-49 years. It most frequently develops in the palatal salivary glands, with more than 75% of all cases occurring in the posterior palate. Often present as unilateral and only 20% cases show bilateral palate involvement [1].

It is reported in all the region where minor salivary gland tissue is present like, retromolar area, buccal mucosa, tongue, incisive canal and labial mucosa, even cases of parotid gland and submandibular gland is also reported [2].

Case Report

A 34yr old male patient reported with a complaint of pain and redness in the palate region since 2 days. He started experiencing difficulty in swallowing and noticed a ulcer in the palate which was associated with pain. Pain was sudden in onset, throbbing in nature with mild to moderate in intensity and is localized and intermittent. It was aggravated by swallowing food and relieved on its own. Pain was associated with redness in the palate. 6-7 months back patient had ulcer on same region,

Corresponding author: Dr Shubhi Maheshwari, Post Graduate student, Department of Oral Medicine & Radiology, People's Dental Academy, People's University. Mobile- 7000687440, Email id- shubhimaheshwari16@gmail.com

Fig 1 – showing ulcer on the hard palate

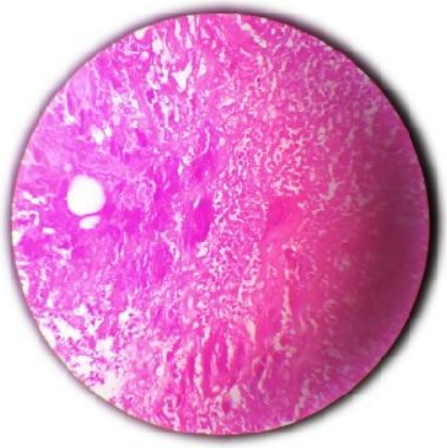

Fig 2- Showing histological section

Fig 3- showing sloughing in the ulcer

which got healed by its own. He gives a history of hookah smoking 2 times a day since for 3-4 years. Now quit the habit since 15days back. On examination, a solitary irregularly shaped ulcer is present at the junction of hard and soft palate measuring approx. 0.5 x 0.5cm. Margins are irregular and reddish- purple in color with floor of the ulcer and surrounding mucosa appeared to be erythematous. On palpation tenderness is present and base of the ulcer was fixed. (Fig 1) Mesio-proximal caries in 26 and fixed partial denture in relation 22. On basis of history and clinical examination, it was diagnosed as acute necrotizing sialometaplasia on junction of hard and soft palate and tumor arising from minor salivary gland was considered under differential diagnosis.

Maxillary occlusal radiograph and orthopantomogram were taken to see any bony erosion on palate which revealed no abnormality in hard palate and endodontically treated 22 and mesio-proximal caries in 26. Hematological investigation shows normal counts. Biopsy was performed and histopathological section showed epithelial covering of palatal mucosa in degenerating and necrotizing form with discontinuity representing ulcerative areas. Stroma shows

lobular form of salivary architecture maintained but the necrotic appearance is evident all over,

Fig 4 – showing ulcer with sloping margins

Fig 5 – showing healing ulcer on follow-up visit

supportive stroma is reactive with lymphocytic and neutrophil infiltrate and disrupted vascularity seen. (Fig 2) Based on these features final diagnosis of necrotizing sialometaplasia was made. Patient was advised with oral anesthetic agent and mouthwash chlorhexidine thrice daily for 15 days. On follow up visit Lesion is increased in dimension edges appears punched out and redness with sloughing was present at the base. (Fig 3)

Patient was given with antibiotics cap. Amoxicillin 500mg thrice times a day and anti-inflammatory tab. Ibuprofen 400mg twice daily for five days to prevent secondary infection and pain. On subsequent visit Lesion is decreased in dimension, Inflammation is reduced. Edges become sloping and depth decreased with sloughing and granulation tissue was present at the base. (Fig 4) Patient was under continues follow-up.(Fig 5)

Discussion

Necrotizing sialometaplasia is benign reactive lesion of minor salivary gland. It may mimic squamous cell carcinoma or mucoepidermoid carcinoma, both clinically and histologically, that creates diagnostic dilemma [3]. Male predilection with 20-70 age group individuals are commonly affected. Common clinical presentation of NSM is an ulcer presenting as a crateriform lesion with indurated and well-delineated borders, usually present on the palate. Histological stages are used by Anneroth and Hansen to classify the NSM into five stages: infarction, sequestration, ulceration, reparative, and healed. It is not possible see

each stage in well demarked stages in any histological section [4].

The most widely accepted theory explaining the etiology of NSM is ischemia of the blood vessels, leading to infarction of the gland tissues [5]. The factors believed to lead to ischemia are trauma, administration of local anaesthetics', smoking, alcohol and cocaine use, infection, intubation, use of unadapted dental prothesis, radiotherapy, violent or induced vomiting like in patients with bulimia and surgical procedures for various lesions [4,6,7]. In our case patient give the history of hookah smoking twice daily that could be one of reason for ischemia of micro vasculature of salivary gland tissue.

The differential diagnosis of necrotizing sialometaplasia should consider other ulcerative and erosive lesions, including those of traumatic or inflammatory/infectious aetiology, e.g., dental fissures, major aphthae, tuberculosis, tertiary syphilis or deep fungal infection in patients with AIDS or under immunosuppressive treatment and those of cancerous origin, e.g., squamous cell carcinoma, mucoepidermoid carcinoma, adenoid carcinoma, leukaemia, non-Hodgkin lymphoma or sarcoma [8].

Management of these lesions should always include an incisional biopsy and close follow-up until their complete disappearance, administering analgesics in cases of pain. There are usually no recurrences or anatomic or functional sequelae. NSM lesions heal by secondary intention without treatment within 4-10 weeks and the healing time is primarily related to the size rather than the nature of the lesions [9].

Conclusion

Necrotizing sialometaplasia is a self-limiting disease and heals spontaneously within 4 to 8 weeks with only minimal supportive treatment. The clinical and histological similarity between this entity and a malignant lesion leads to a risk of unnecessary or inadequate treatment. This case illustrates the need for an incisional biopsy to be a analysed by an experienced oral physician to establish a correct diagnosis.

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