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CASE STUDY

NECROTIZING SIALOMETAPLASIA

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ABSTRACT

Necrotizing sialometaplasia (NS) is a benign disease showing inflammatory response which occurs in minor salivary glands mimicking a malignant lesion both clinically as well as histopathologically. The lesion occurs due to vascular ischemia caused by trauma. We present a case of necrotizing sialometaplasia in a 80 years old male patient, who reported with a complaint of pain in posterior maxilla.

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INTRODUCTION

Necrotizing sialometaplasia (NS) is a benign lesion of salivary gland tissue which mimics squamous cell carcinoma clinically and histopathologically. (Mesa *et al*., 1984) NS was first reported by Abrams in 1973 as an inflammatory reaction concerning minor salivary glands of the hard palate. This condition can occur in any age group with a mean age of 50 years. Male to female ratio is 2: 1. (Abrams *et al*., 1973) Most common site is palate followed by retromolar area, gingiva, buccal mucosa, nasal cavity. (Kimura *et al*., 2011) We report a case of NS in 80 years old male patient without any significant associated history.

Case report

An 80 years old male patient presented with complaint of pain in the right maxillary posterior region since 7 days. Lesion was present since 5 months and pain is persistent since 3 months but has become intense in these 7 days. Patient gave a history of extraction 8 years back. No other significant past history was present. Intraoral examination revealed an ulcerative lesion measuring 1.5x 2cm in diameter with necrosis of posterior palatal tissue leading to brownish slough formation with exposure of bone and perforation of the edentulous portion i.r.t 16 and denuded mucoperiosteum. (Fig. 1) A provisional diagnosis of fungal infection was made. Traumatic ulcer was included in differential diagnosis. Routine laboratory investigations were normal. An incisional biopsy was performed and sent for histopathology. Microscopic features revealed acinar necrosis and associated squamous metaplasia of the salivary ducts, with preservation of overall lobular architecture. There was liberation of mucin, with an associated inflammatory response. (Fig. 2a, 2b) The overall features were suggestive of necrotizing sialometaplasia. The patient was advised to keep a good oral hygiene, with local application of gentian violet over the lesion 3-4 times daily. Patient was on follow up for 3 months and showed resolution of ulcerative area.

DISCUSSION

Necrotizing sialometaplasia (NS) is a benign, self-limiting, disease of the minor salivary glands. (Randhawa *et al*., 2009) The most commonly accepted etiology is said to be associated with ischemia, which could be due to trauma, ill fitting dentures, smoking or any other infection. (Imbery and Edwards, 1996) It occurs mostly in males with average age of occurrence to be 46 years. (Bascones-Martínez *et al*., 2011) The present case was reported in an 80 years old male patient. Initial symptoms associated with NS include fever, chills, malaise. Most common site of presentation is posterior hard palate followed by junction of the hard and soft palate. Present case occurred in posterior palatal region. Most cases present with dull pain. (Ylikontiola *et al*., 2007) Present case showed ulceration with perforation and tenderness over the lesion.

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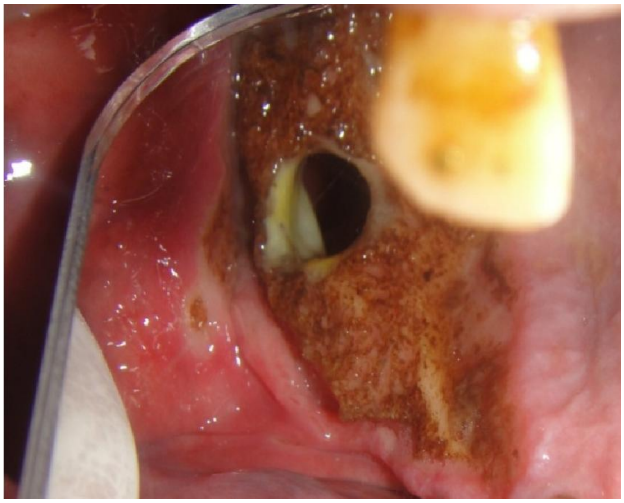

Fig. 1. Intra oral examination reveals yellowish brown slough with a region of perforation at posterior palate

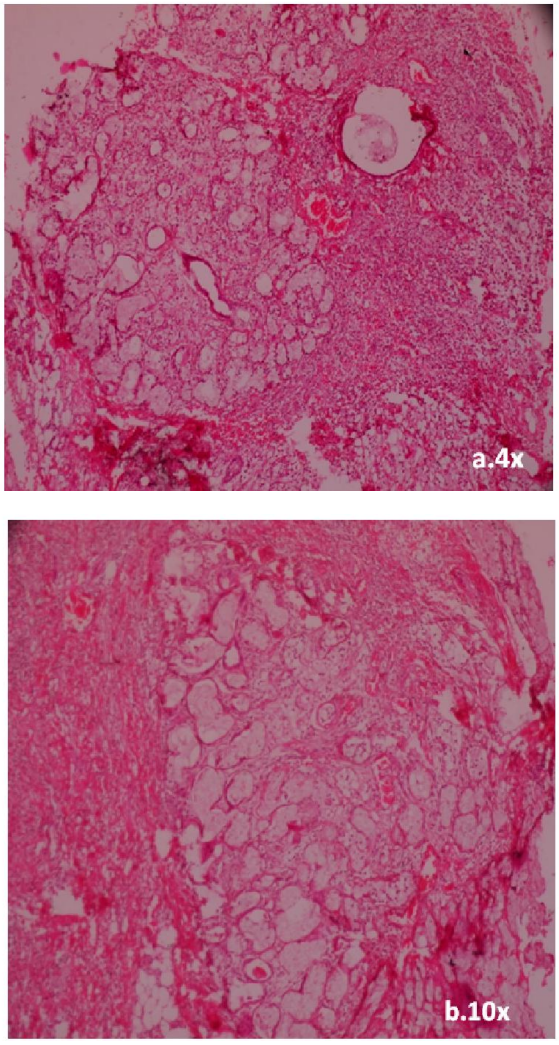

Fig. 2. Photomicrograph showing acinar necrosis with preserved lobular architecture and squamous metaplasia

The differential diagnosis should include granulomatous and fungal infections. But culture tests should be performed in order to rule them out. Microscopic features include pseudo-epitheliomatous hyperplastic epithelium, inflammatory reaction and squamous metaplasia of ductal epithelium, necrotic ductal acini with preservation of lobular structure.

Histopathologically, NS is classified into 5 stages by Hansen and Anneroth *et al* which include Infarction, sequestration, ulceration, reparative stage and healed stage. Our case showed acinar necrosis & squamous metaplasia of ducts with preserved lobular architecture. (Anneroth and Hansen, 1982) Histopathological differential diagnosis includes mostly squamous cell carcinoma and mucoepidermoid carcinoma. NS is distinguished from these malignant lesions by the ductal necrosis with preservation of the lobular architecture, non-infiltrative growth pattern, lack of any malignant cytology. Also, immunostaining of myoepithelial cells around squamous nests by calponin or smooth muscle actin helps differentiate NS from squamous cell carcinoma and mucoepidermoid carcinoma. NS lacks the intermediate cells and cystic structures as present in mucoepidermoid carcinoma. (Barnes *et al*., 2005) Lesion is usually self limiting and is resolved in few weeks. Management is symptomatic with no need for surgery. (Brannon *et al*., 1991)

Conclusion

NS is a benign, self limiting lesion. Careful clinical and histopathological examination is necessary in order to avoid misdiagnosis and treat

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