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A Rare Case of Recurrent Fibroepithelial Hyperplasia with Calcification in the Anterior Palate- A Case Report

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ABSTRACT

Fibroepithelial hyperplasia is a localized proliferative tissue response most frequently to chronic low-grade irritation. Such lesions are most commonly found on the gingiva and do not resolve spontaneously. This article reports such a lesion in an uncommon location in the oral cavity- the anterior palate, in this case associated with calcification as found in the histopathology.

Key Words: Fibroma, Fibroepithelial Hyperplasia, Calcification, Excisional Biopsy

INTRODUCTION

The oral cavity is exposed to various internal and external stimuli resulting in a myriad of exophytic lesions, which may be anything from developmental to reactive and neoplastic in nature.[1] Reactive lesions are clinically and histologically non-neoplastic nodular swellings that develop in response to chronic low-grade injury stimulating an exuberant tissue response.[2]

Fibroepithelial hyperplasia is a localized, proliferation of oral mucosa usually in response to chronic injury or local irritation. The term "focal fibrous hyperplasia" implies a reactive tissue response and is therefore preferable to the term "fibroma" which is often erroneously used and denotes a true neoplastic proliferation of fibrous connective tissue.[3] This article reports a recurrent case of fibroepithelial hyperplasia in a relatively rare location in the oral cavity- the anterior palate!

CASE REPORT

A 19 year old female reported to the Department of Periodontics with the chief complaint of a nodular swelling in the anterior palatal region since 1 year. The patient complained of associated difficulty in chewing and esthetic concerns. Initial examination revealed a smooth surfaced nodular swelling on the palatal aspect of the upper central incisors. [Figure 1] The swelling was firm and non-tender on palpation.

Figure 1- Initial presentation of the patient

On further probing, the patient revealed that a similar swelling at the same site had been surgically excised a year ago. However within 15 days of the surgery, the patient noted a recurrence of the swelling, which increased gradually in size up to the present size and has persisted since. The patient had no documented information regarding the previous surgery. Patient's personal history, family history and medical history were found to be non-contributory.

General examination was done. Lymph nodes were non-palpable and non-tender. Extraoral examination revealed incompetent lips due to proclined upper anterior teeth. This was followed by a thorough intraoral examination. All the teeth except third molars were present. The patient had good oral hygiene, no carious lesions were present. Transposition with upper left lateral incisor and canine was noted.

Next the swelling was examined. It was found to be a well-demarcated mass located in the midline, just palatal to the upper central incisors and appearing to involve the interdental papilla. It was pale pink in colour with a smooth, non-ulcerated surface. The growth was found to be ovoid in shape with greatest dimensions medio-laterally, measuring 10 mm in length and approximately 6mm in width. [Figure 2] A 5 mm diastema was present between the central incisors which had increased with the occurrence of the palatal swelling as per the patient's history. Also there were 5-7 mm pseudopockets associated with the central incisors. The lower incisors were found to be impinging on the palatal mass when the patient was asked to occlude her teeth in centric relation. Provisional diagnosis of fibroma of the anterior palate was given.

Figure 2- medio-lateral and antero-posterior dimensions measured

Phase I therapy was performed. After thorough oral prophylaxis, radiographs were taken. Intraoral periapical radiographs did not reveal involvement of the interdental bone. [Figure 3] Upper and lower alginate impressions were taken in order to obtain study casts for treatment planning. [Figure 4] To rule out dysplastic changes, VELscope examination of the swelling was conducted. [Figure 5] The examination did not reveal any abnormal findings (otherwise noted as a darkened area). Although not a definitive diagnostic modality as to the presence of dysplastic and/or neoplastic tissue, it served as a convenient tool to alleviate patient's anxiety regarding the pathology.[4]

Figure 3- IOPA of upper central incisor region

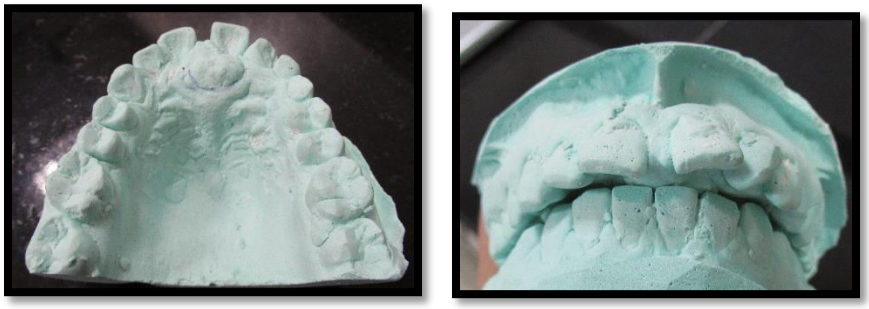


Figure 4- Study casts

Figure 5- VELscope examination

Following one week of phase I therapy, it was decided to conduct excisional biopsy of the lesion. Pre-procedural rinsing was done with 10 ml of 0.2% Chlorhexidine Gluconate mouthrinse for 1 minute. Local anaesthesia was administered using local infiltration technique- 2% Lignocaine Hydrochloride with Adrenaline (1:80,000) around the lesion.

After securing the mass with tissue holding forceps, external bevel incision was placed using a no. 15 blade. [Figure 6] The incision was given along the line of demarcation between the swelling and uninvolved palatal mucosa. The swelling was excised in toto. [Figure 7] Following this the interdental papilla was recontoured for improving the esthetics. The area was debrided, the exposed root surfaces were planed and the surgical site was allowed to heal by secondary intention. [Figure 8] Periodontal dressing (Coe-Pack) was given following tin-foil placement to protect the surgical wound. Post-operative instructions were given to the patient. Twice daily rinsing with Chlorhexidine mouthrinse was advised. Analgesics and antibiotics were prescribed and the patient was recalled after 1 week.

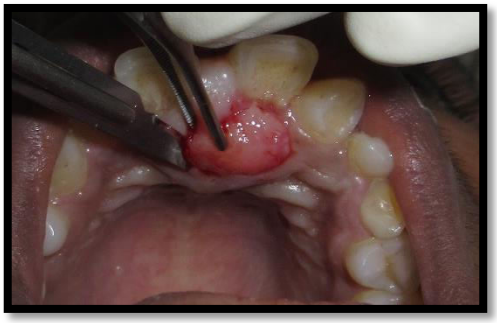


Figure 6- External bevel incision using No. 15 blade

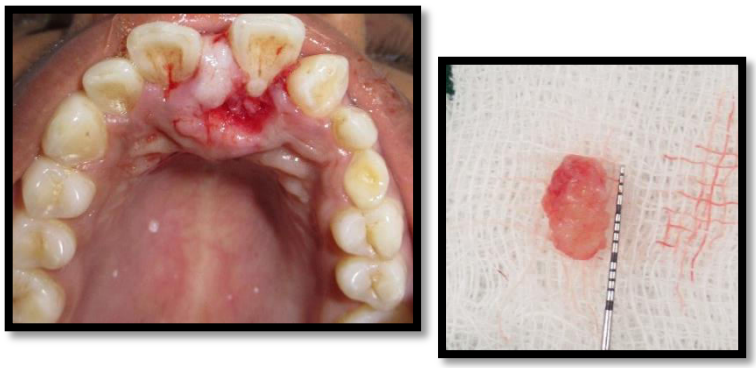


Figure 7- Following complete removal of the soft tissue swelling

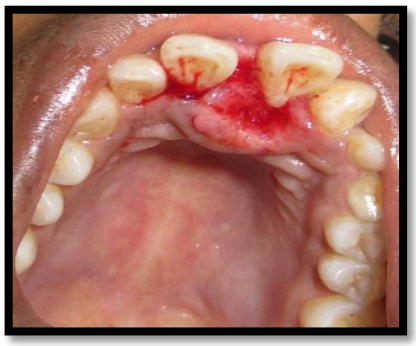


Figure 8- Recontouring of the interdental papilla

At the first follow-up visit after 1 week, the tin foil and periodontal dressing were removed. The surgical site was gently flushed with normal saline. Satisfactory healing of the surgical site was noted. [Figure 9] The diastema was found to be reduced to 4 mm from an initial 5 mm. Oral hygiene instructions were reinforced and patient was kept under follow-up. After 1 month complete resolution of the surgical wound was seen. [Figure 10] There was a further reduction in the midline diastema by 0.5 mm. The patient was satisfied with the treatment performed and did not wish to undergo further orthodontic treatment. 6 monthly recall shows no recurrence of the lesion.

Figure 9- 1 week follow up

Figure 10- 1 month follow up

Histopathology: The Haematoxylin Eosin stained slide section showed parakeratinised stratified squamous epithelium. The underlying connective tissue showed bundles of collagen fibres and inflammatory cell infiltrate. Areas of calcification were noted. Overall the histopathological features were suggestive of fibroepithelial hyperplasia with calcification. [Figure 11]

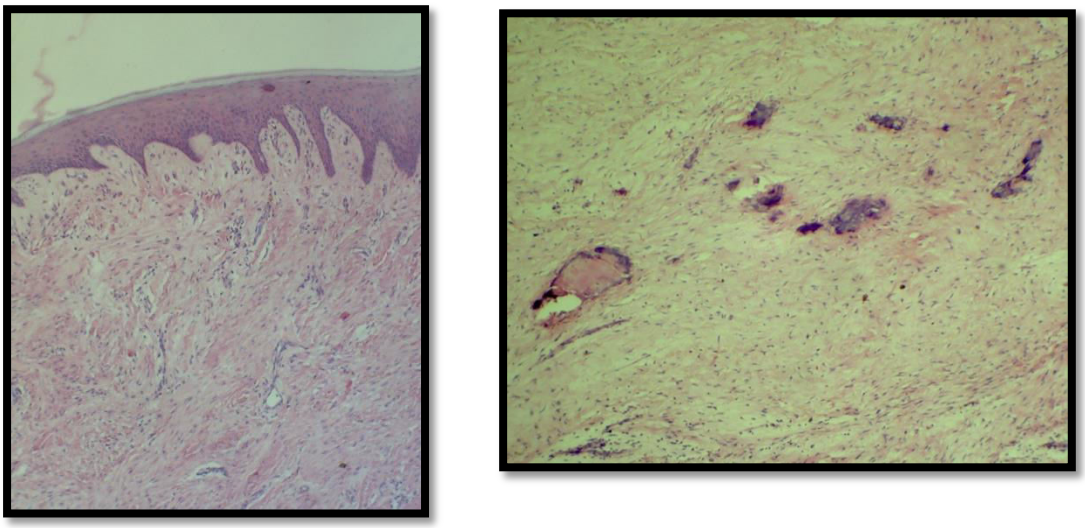
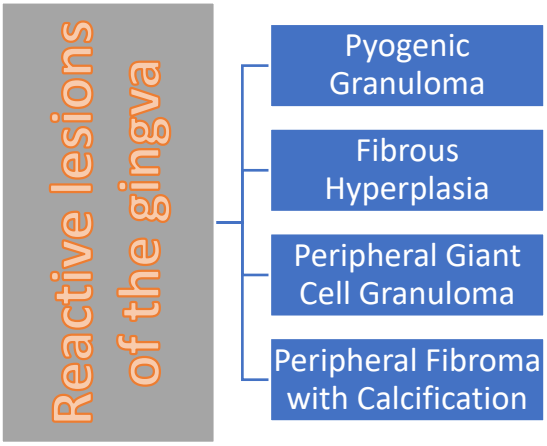


Figure 11- Histopathology H & E section

DISCUSSION

The oral mucosa is under constant irritation from masticatory forces, minor trauma, trapped food and debris, plaque, calculus and iatrogenic factors. The tissues react to these irritants by developing a type of growth- which is not a neoplasm but considered to be a nonspecific hyperplastic inflammatory reaction.[3,5] These reactive lesions may present in varied forms such as pyogenic granuloma, fibrous epulis, peripheral giant cell granuloma, fibroepithelial polyp, peripheral ossifying fibroma, giant cell fibroma, pregnancy tumour etc.

Kfir et al[3] have specifically classified reactive gingival lesions as follows



While several authors believed that many of these lesions are true fibromas, Cooke 1956[5] proposed that, they are reactive in nature the cause being local irritation. Barker and Lucas 1967[6] examined 650 fibrous overgrowths of the oral cavity and found only 2 true neoplasms. The term "focal fibrous hyperplasia" was put forth by Daley et al.1990[7] which implies a reactive tissue response, is preferable to the term, fibroma" which implies incorrectly, a benign neoplastic proliferative fibrous connective tissue.

Distinction between hyperplasia and neoplasia needs to be clearly defined as neoplasias are not selflimiting conditions and long standing hyperplastic lesions in presence of chronic irritation can get converted to neoplasia. A few of the predominantly fibrous overgrowths present with only a thin epithelial covering and inflammation, are called as inflammatory fibrous hyperplasias. While others showing hyperplasia of the epithelium and connective tissue stroma are called as fibro-epithelial hyperplasias.[8]

In a retrospective study by D. Halim et al conducted in 2010[9] on 168 patients, it was found that 71% of the fibromas occurred in female population with peak incidence occurring in the 3rd decade of life. Highest occurrence rate was found on the buccal mucosa (41.9%) and least on the tongue. A retrospective clinical analysis[10] of the clinical features of 530 cases of reactive lesions of the oral cavity showed that inflammatory

gingival hyperplasia was the most predominant lesion followed by pyogenic granuloma. All of the cases of fibro-epithelial hyperplasia were only found on the gingiva, none on the hard palate.

Treatment of such lesions involves performing excisional biopsy. This may be done by means of a surgical scalpel, electrosurgery, lasers, peizosurgery among others. For the above patient we chose to perform surgical excision of the lesion with a scalpel due to its relative ease of use, more predictable wound healing, lack of need for extensive armamentarium and low cost.

CONCLUSION

Fibroepithelial hyperplasia is a relatively common occurrence in the oral cavity. Many of them are often misdiagnosed as oral fibromas. Surgical excision of these lesions followed by histopathologic examination is essential in order to obtain an accurate picture of such lesions.

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