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Surgical removal of a focal fibrous hyperplasia: Two case reports

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Abstract

Focal fibrous hyperplasia is the most common epithelial benign tumor of the oral cavity. It is a localized reactive progressive, proliferation of oral mucosa in response to injury or local irritation. Females are twice more likely to develop fibroma than male. Treatment usually requires total excision and recurrence is rare. This case report describes two cases of focal fibrous hyperplasia, which was successfully treated by surgical excision.

Keywords: irritation fibroma, benign tumor, Focal fibrous hyperplasia

Introduction

The oral cavity is a dynamic region that is constantly exposed to various external and internal stimuli, resulting in a myriad of diseases, from developmental to reactive and neoplastic. ^[1] Focal fibrous hyperplasia is the most common epithelial benign tumor of the oral cavity and usually looks like a soft sessile nodule, generally located on the buccal or labial mucous membrane or the lateral edge of the tongue. ^[2] The focal fibrous hyperplasia is the consequence of chronic irritation or injury. ^[1-4] its surface is covered with a normal mucous with sometimes on the top a keratotic patch or an ulceration linked the chewing trauma. The lesion is clinically asymptomatic and can occur again when the etiology is not eliminated. ^[1, 2] This paper reports two surgical removal cases of focal fibrous hyperplasia.

Case report

Case1

A 45 years old female consulted our department with a chief complaint of a growth in the right buccal mucosa of the mouth for the past nine months. The patient's history revealed a habit of sucking buccal mucosa whenever she is stressed. The lesion started as a small nodule and grew, but no change since then was noted. The intraoral examination revealed localized, compressible, oval and well defined soft nodule of 1 x 0, 5 cm in diameter with bluish red cast in the lower right buccal mucosa corresponding to the premolar region. The color of the nodule resembled normal mucosa (fig 1). No other signs or symptoms were detected. On the basis of clinical findings, provisional diagnosis of a fibro-epithelial hyperplasia was given.

The treatment consisted in the complete surgical excision. After infiltration during anesthesia far from the lesion, it was held by a silk suture (fig 2). Incision was performed with a 15 bistoury blade. The fibers were cut with a hemostasis hook for good healing (fig 3). The wound was sutured using a 3-0 black silk suture (fig 4). The resection specimen (fig 5) was sent to the anatomic-pathology lab for histological examination which confirmed the diagnosis of a fibrous hyperplasia.

The microscopic examination of the hematoxylin and eosin stained section showed, a single bit of tissue with epithelium and underlying fibrous connective tissue stroma under scanner view. High power view revealed a stratified squamous Para keratinized epithelium with both areas of hyperplasia and atrophy. The underlying stroma was dense fibrous in nature with less vascularity and cellularity. Collagen fiber bundles are scattered in all direction with stellate fibroblast between them. The sub epithelial chronic inflammatory cell infiltrate like lymphocytes and plasma cells were noted. The patient have been taught how to get rid of her sucking habit and she did not complain of any recurrence for a one year period.

Case 2

A 51 years old female consulted our department with a chief complaint of symptomatic mass in the right buccal mucosa from past 6 months. The intraoral examination revealed the presence of a sessile, ulcerated, non-well - lobulated soft tissue mass of 1x1 cm located in front of molar tooth decay. When the patient closed her mouth, the lesion assumed the shape of the tooth decay (fig 6). The treatment consisted of the complete surgical excision and extraction of the tooth. After giving adequate local anesthesia, the lesion was held with forceps and separated from the base with a 15 bistoury blade and sutured. The excised lesion was stored in formalin and sent for histopathologic examination. The histopathological examination revealed parakeratotic stratified squamous epithelium. Underlying connective tissue showed bundles of collagen arranged haphazardly. Few endothelial lined blood vessels were noted. The diffuse chronic inflammatory infiltrate was shown. The histopathologic findings confirmed the diagnosis of fibroma. The patient was followed up for 6 months. The surgical site appeared healing well and there was no evidence of recurrence of the lesion.



Fig 1: Intraoral view of the lesion



Fig 2: Lesion hold by a silk suture after anesthesia infiltration.



Fig 3: The fibers were cut with hemostatis hook for good healing after the lesion incision



Fig 4: The wound was sutured using a 3-0 black silk suture.



Fig 5: This resection specimen was sent to the anatomic-pathology lab for histological examination witch confirm the diagnosis of a fibro-epithelial hyperplasia



Fig 6: The intraoral examination showing the lesion in front of a molar tooth decay

Discussion

The reactive lesions are commonly observed in the oral cavity due to the high frequency of tissue injuries and are clinically not easily distinguished. A review of 15,783 oral lesions during a 17.5-year period by Weir *et al* 1987 found that fibromas, periapical granulomas, mucoceles, and radicular cysts were the most common reactive lesions observed in the oral cavity. It has been shown that 77% of lesions observed in the oral cavity are reactive in nature. [5]

Focal fibrous hyperplasia is also known as irritational fibroma, oral fibroma or as fibromatosis fibroma. [4] It is a localized reactive response of the oral mucosa to injury or chronic irritation. [2-6] Fibroma occurs as a result of a chronic repair process that includes granulation tissue and scar formation resulting in a submucosal fibrous mass. [1] It occurs more commonly the buccal mucosa along the occlusal line followed by labial mucosa, gingiva and palate. Biting of the cheek is considered to be one of the reasons for the occurrence of fibroma along the occlusal line. [7] Deley *et al.* 1990 suggested the term “focal fibrous hyperplasia” which implies a reactive tissue response and is therefore preferable to the term “fibroma” which implies incorrectly, a benign neoplastic proliferative fibrous connective tissue. [3]

It is more common in the 2nd and 3rd decade as in the study of Al-Rawi 2009. However, the study of Ramu and Rodrigues

2012 showed a predominance of Focal fibrous hyperplasia in the 4th decade. The lesion is seen in the same age groups, location and with a female predilection. ^[5]

Clinically, it is a sessile nodule of a few millimeters in diameter, soft and painless, that gradually gets hard and sometimes pedunculated ^[2]. Color may be similar to mucosa or vary depending on extent of inflammation. ^[8] It is generally isolated, round and is coincident with a gap in the dental arch (missing tooth or malposition); it may also look like nodules that are horizontally aligned on the mucous membrane of the lower lip and, when the mouth is closed, will fit in the space situated between the lower and upper incisors ^[2]. The lesions are asymptomatic ^[2]. The lesion must be differentiated from an epulis, papiloma, lipoma, peripheral ossifying fibroma and a peripheral giant cell granuloma ^[1,2].

Microscopically, reactive fibrous hyperplasia appear as a nodular mass of fibrous connective tissue with mature or immature collagen fibers mixed with fibroblasts and varying degree of inflammatory cell infiltrate of different cell lineage. Epithelium shows presence of stratified squamous parakeratinised cells well separated from connective tissue stroma. ^[8] The lesion is treated by complete local excision and removal of chronic irritant. ^[1-8] Recurrence rates are low and recurrence is mostly caused by repetitive trauma at the site of the lesion. ^[1,2,7,9] In a study of Pedron and all 2009, excision was done using Nd: YAP laser and Photo-bio modulation using In-Ga-AIP which showed safe, quick procedure and better healing than conventional surgery. ^[10] However, in this case conventional excision of the lesion was done using scalpel. A focal fibrous hyperplasia does not pose a risk of malignancy ^[1].

Conclusion

The focal fibrous hyperplasia is a very frequent type of benign connective tumor, usually easy to diagnose. There is no reported malignant evolution and the excision is generally easy to perform. If the causal factor is not eliminated, recurrence is frequent.

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