



## Focal Fibrous Hyperplasia: Two Case Reports

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### Abstract

**Introduction:** Focal fibrous hyperplasia is a lesion of reactive nature afflicting the gingival mucosa in most of cases, with idiopathic etiology.

**Presentation of the case:** This paper reports two cases of focal fibrous hyperplasia in both maxillary and mandibular locations.

**Conclusion:** Focal fibrous hyperplasia is a slowly progressing lesion, the growth of which is generally limited. Many cases will progress for long periods before patients seek treatment because of the lack of symptoms associated with the lesion.

**Keywords:** Focal Fibrous Hyperplasia; Gingiva; Oral mucosa

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**Consent:** Consent was taken from the patient for publication of these case reports.

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## Introduction

Focal fibrous hyperplasia (FFH) is a benign neoplasm rare in the oral cavity. Its origin is fibroblastic in most cases reported in the literature [1]. It is known that the majority of the fibromas occurring in the oral mucosa are not true neoplasms. They represent a reactive hyperplasia of fibrous connective tissue in response to local irritation or trauma [2]. The occurrence of irritation fibromas among the Moroccan population was found to be 30.5% [3]. Stout said that “it is exceedingly difficult to decide whether or not there is true benign neoplasm composed of fibroblasts” [2]. Since true fibromas of oral and maxillofacial areas are infrequent [4]. The histologic criteria of a true fibroma were first described by Barker and Lucas. Many more cases of true gingival fibroma have been reported in literature since then [5]. The aim of our paper is to report two cases of focal fibrous hyperplasia located in both the maxillary and mandibular gingival mucosa.

## Case Report 1

A 40-year-old female patient reported to the Oral Surgery Department of the Consultation Center of Dental Treatment with The chief complaint of bleeding from gums in maxillary posterior premolar region from past 6-7 months. No relevant medical history was reported. The lesion was gradually increased in size with history of bleeding and no pain.

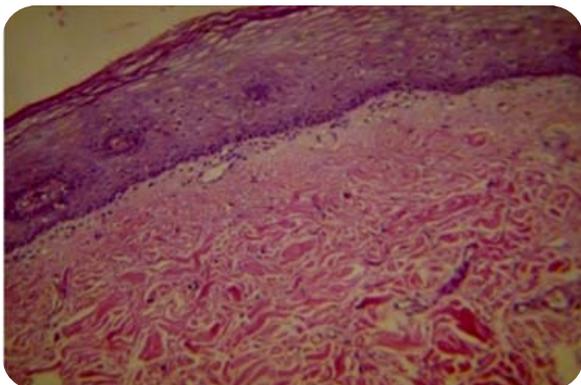
The Intra-oral examination revealed a sessile firm in consistency and well defined growth mass in relation to 24,25 and 26 on the buccal side, measuring approximately 1.5 x 1 cm in diameter, extending from mesial surface of 24 to mesial surface of 26 (Figure 1). Based on the clinical symptoms, the provisional diagnosis made was focal fibrous hyperplasia. Differential diagnosis was given, and has included the following chronic fibrous epulis,osteosarcoma and pyogenic granuloma. An excisional biopsy was performed. Under local anaesthesia, excisional biopsy was performed, followed by a surgical flap raised to complete the excisional mass biopsy (Figure 2) and then, analysed under microscope. Different sizes of multiple foci of same calcified areas within connective tissue has been revealed (Figure 3). Thus, the histological examination concluded a focal fibrous hyperplasia as final diagnosis for the lesion. The patient was followed-up during a period of one month and showed a complete healing with no sign of recurrence (Figure 4).



**Fig. 1** Pre-operative View : Sessil mass located in the buccal gum mucosa in the region of 24,25 and 26.



**Fig. 2** Per-operative view: Surgical flap raised to complete the excisional mass biopsy.



**Fig. 3** Histological analysis showing focal fibrous hyperplasia with dense bundles of collagen fibers and moderate number of fibroblasts and fibrocytes along with little chronic inflammatory cells (H & E Stain X 200).



**Fig. 4** Follow-up after one month: complete healing with no sign of Recurrence.

## Case Report 2

A 35 year-old female patient reported to the Oral Surgery Department of the Consultation Center of Dental Treatment with the chief complaint of bleeding from gums in mandibular posterior molar region from past 9 months. No relevant medical history was reported. The lesion was gradually increased in size and no history of bleeding and pain were noted.

The Intra-oral examination revealed a sessile mass, firm in consistency and well defined in relation to 36,37 on the buccal side, measuring approximately 1.5 x 1 cm in diameter, extending from distal surface of 36 to mesial surface of 37 (Figure 5).

The radiological examination revealed a slight bone resorption in the papillar region in front of the 36-37 (Figure 6).

Based on the clinical and radiological data, the provisional diagnosis made was focal fibrous hyperplasia 1. Differential diagnosis was given, and has included the following chronic fibrous epulis,osteosarcoma and pyogenic granuloma.

An excisional biopsy was performed. Under local anaesthesia, excisional biopsy was performed, followed by a surgical flap raised to complete the excisional mass biopsy (Figure 7, 8 and 9) and then the flap was repositioned and sutured (Figure 10). The lesion specimen was then sent to pathology which revealed a mass of fibrous connective tissue\_nodules covered by a multilevel squamous epithelium. This lesion has no capsule, fibrous connective tissue is mixed around the connective tissue. Collagen fibers are arranged circularly (Figure 11). Thus, the histological examination concluded an focal fibrous hyperplasia as final diagnosis for the lesion. The patient has disappeared ever since, and we couldn't get in touch with him for a further follow-up.



**Fig. 5** Pre-operative View : Sessile mass located in the buccal gum mucosa in front of 36-37.



**Fig. 6** Slight bone resorption in front of the papillar region between 36-37.



**Fig. 7** Per-operative view showing the sessile aspect of the lesion.



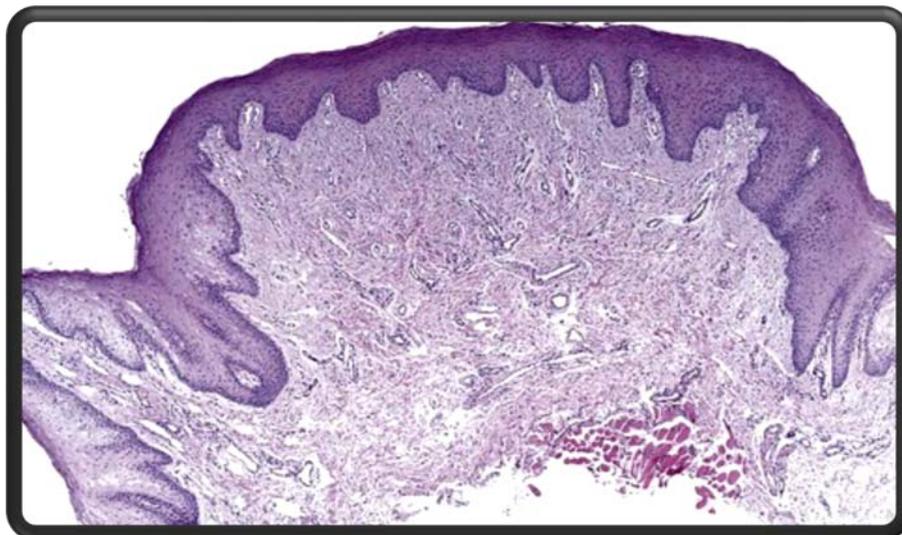
**Fig. 8** The excised lesion specimen



**Fig. 9** Per-operative view: Surgical flap raised to complete the excisional mass biopsy in order to avoid recurrence.



**Fig. 10** Post-operative sutures



**Fig. 11** Histologic examination of this lesion indicates a mass of fibrous connective tissue nodules covered by a multilevel squamous epithelium. This lesion has no capsule, fibrous connective tissue is mixed around the connective tissue. Collagen fibers are arranged circularly.

## Discussion

The “inflammatory hyperplasia” is non specific term used to appreciate nodular growths of the oral mucosa that histologically shows inflamed granulation tissue [5,6,7]. Epulis is often referred to a similar lesion on the gingival mucosa and size of these masses (hyperplastic) may be smaller or larger ,which depends on components of inflammatory reaction and the response of healing are overemphasized in these particular lesions [5,8]. The reactive lesions are common in the oral cavity because of the frequency with which the tissues are injured. They can be classified into focal fibrous hyperplasia, peripheral ossifying fibroma, pyogenic granuloma and peripheral giant cell granuloma. Different synonyms for focal fibrous hyperplasia are irritational fibroma [7], fibromatosis fibroma [8]. In between third and fourth decade of life, focal fibrous hyperplasia occurs more commonly in females than in males , as in our 2case reports we are presenting a case of 40-year-old female. The high female predilection and a peak occurrence is in the first and second decade and declining incidence after the third decade of life suggested some studies evoking hormonal influences. The frequency of focal fibrous hyperplasia is found to be more in maxilla than the mandible and more often in incisor cuspid region, ranging between 55-62% [9].In our first case, the lesion was present in relation to 24, 25 and 26 tooth region, and between 35 and 36 in the second case . The diameter of these lesions usually measures less than 1.5cm and more than 3cm in rare cases. In few cases, lesions of 6 cm and 9 cm have also been reported. The surface of the lesion may be ulcerated in 66% of cases and intact in 34% of cases [10]. In our case, diameter of lesion was 1.5 cm x 1 cm in diameter. The lesion represents various stages of fibroma with ossification. However, ossification or calcification may not be present in all such cases, particularly in early stages of growth of lesion [10,11]. Bone formation or dystrophic calcification may be seen with foci of radiopaque material,especially in large lesions or lesion with veraciously mineralization. Focal fibrous hyperplasia can produce interdental destruction of bone with migration of

teeth [10-12]. Histopathologically, focal fibrous hyperplasia can be seen as a stratified squamous epithelium which can be intact or ulcerated along with atrophy [13,14].

Treatment includes Staging and surgical excision of the lesion with totally removal of involved periodontal ligament and periosteum to minimize recurrence rate of the lesion. Any other irritants such as an ill-fitting of dental appliance and high restoration should be removed [12,13]. Long-term follow-up is mandatory for these types of cases because of the high growth potential of incompletely removed lesion [15,16]].

## Conclusion

Focal fibrous hyperplasia is a slowly progressing lesion, the growth of which is generally limited. Many cases will progress for long periods before patients seek treatment because of the lack of symptoms associated with the lesion. Discussion of the differential diagnosis should be done tactfully. Long term follow up is required to prevent recurrence of the lesion [16].

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