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# Inflammatory Fibroepithelial Hyperplasia - A Case Report

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**ABSTRACT**: Fibroepithelial hyperplasia's are reactive-progressive proliferation of oral mucosa in response to injury or local irritation and gives rise to variety of lesions named according to their clinical presentation. It is a histological variant of fibroma and because of their proliferative nature, they often cause aesthetic and functional problems. A case of a 49-year-old female, who presented with gingival overgrowth in the upper anterior region for the past 6 months. The lesion was excised using scalpel, sent for histopathological evaluation and uneventful healing was noticed. The case demonstrates the need for awareness, and role of biopsy and histologic evaluation in management of these type of reactive lesions, as longstanding lesion in presence of chronic irritation may convert into a neoplasm.

**KEYWORDS:**Fibroepithelial hyperplasia, Irritation fibroma, Reactive lesions.

## I. BACKGROUND:

Irritation fibroma is the most common oral fibrous growth and arises from the gingival connective tissue and periodontal ligament[1]. Irritation fibroma, or traumatic fibroma, which occurs in response to trauma from teeth or dental prostheses was first reported in 1846 as fibrous polyp and polypus[2]. Reactive fibrous hyperplasia is the histological variant of fibroma and its other names include traumatic fibroma, irritation fibroma, focal fibrous hyperplasia, peripheral fibroma.

The prevalence of reactive lesions of the gingiva is reported to be rather common with the peripheral fibroma being the most common category (56 – 61%) followed in descending order by the pyogenic granuloma (19 – 27%), peripheral ossifying fibroma (10 - 18%), and peripheral giant cell granuloma (1.5 – 7%) based on over 3000 cases studied.[2]

## II. CLINICAL MANIFESTATION:

The lesions are generally asymptomatic and appears as a raised mass (dome shaped nodule) that is pedunculated or sessile with a smooth surface and is usually the same colour as the surrounding gingiva. The nodule is usually less than 1 cm in diameter. If traumatized the surface may ulcerate and alter the pale pink colour of the lesion.[3] They are commonly found in the interdental papilla of the anterior teeth (60% in maxilla), in adults (fourth to sixth decade of life) with a slight female predilection. Most often the local irritational factors are due to calculus, caries, defective restorations, and trauma. Differential diagnosis of fibroma includes giant cell fibroma, neurofibroma, peripheral giant cell granuloma, mucocele, lipoma, or salivary gland tumour. Histologically, fibroblasts scattered in a dense, collagenous matrix, mild chronic, inflammatory infiltrate may be present, but is not a consistent finding.[4] The lesion is managed by surgical excision and has an excellent prognosis with a low recurrence rate.

## III. CASE REPORT:

### A. PATIENT INFORMATION:

A 49-year-old female reported to the outpatient department of periodontology at Rajah Muthiah Dental College and Hospital, Annamalai University, Chidambaram, with a chief complaint of gingival overgrowth in the upper front tooth region for the past 6months. The growth, which was initially smaller, gradually increased to attain the present size and presented with no history of pain, bleeding, or pus discharge in respect to the site of growth. Patient gives previous history of

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similar gingival growth in the same site before 10 years and underwent excision at the same institution. She was a known diabetic and under regular medication for the past one year, underwent lipoma excision before 15 years. Her menstrual history was non-contributory. No abnormality was detected on extraoral examination.

## A. CLINICAL FINDINGS:

On intraoral examination, an oval sessile fibrous overgrowth, pink in colour, was evident on the upper left central incisor (21) extending from interdental papilla to attached gingiva measuring approximately 10mm mesiodistally x 8mm Apico-coronally, with smooth and glossy surface texture(figure 1&2). Oral hygiene status of the patient was poor. Other oral findings included, generalized probing pocket depth of 3-4mm, abnormal tongue thrusting, traumafrom occlusion in lower anteriors, generalized attrition, and spacing in upper and lower anteriors with edge to edge bite. Based on the patient's history and clinical findings, a provisional diagnosis of irritation fibroma was made in relation to 21 and differential diagnosis of pyogenic granuloma and peripheral giant cell granuloma was also considered.

Figure 1: Baseline picture - Before scaling and root planing

Figure 2: Baseline measurements:

Apicocoronally - 8mm

Figure 2: Baseline measurements:
Mesiodistally – 10mm

The patient was subjected to routine haematological and radiographic investigations. Blood investigation was within normal limits. Intraoral peri-apical radiograph revealed widening of periodontal ligament space with crestal bone loss with evidence of sub-gingival calculus (Figure 3

Figure 3: Pre -op IOPA

**Figure 4:** Pre -op picture after SRP(1 week)

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**B. INTERVENTION AND FOLLOWUP:**

Following phase I therapy of complete supra and sub-gingival scaling, occlusal adjustments (coronoplasty) were also done in lower anteriors. A week after SRP, excisional biopsy was performed in relation to 21(Figure 4). Before excision, the lesion was measured apicocoronally and mesiodistally as 9 x 6 mm, respectively (Figure 5). After adequate local anaesthesia, complete excision including 2 mm of healthy tissue was done using scalpel (Figure 6,7).

Complete curettage was done, and periodontal dressing was placed (Figure 8,9) Post-operative instructions were given, and medications prescribed. The excised lesion was preserved in 10% formalin and was sent for histopathological investigation. Patient was reviewed after 2 weeks and uneventful healing was noticed (Figure 10).

**Figure 5:** Pre-op measurements after SRP: Apicocoronally- 6mm.

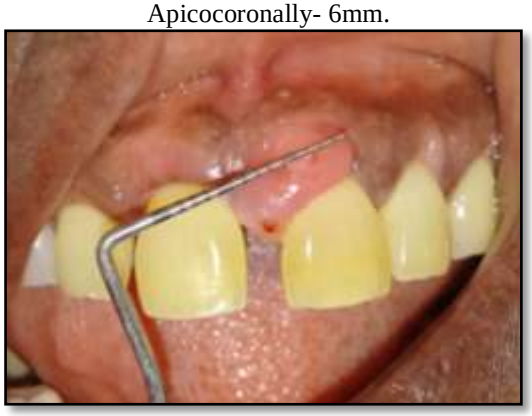

**Figure 5:** Pre-op measurements after SRP: Mesiodistally-9mm.

**Figure 6:** Excision of the lesion

Figure 7: Complete excision of the lesion

**Figure 8:** Complete curettage done.

Figure 9: Periodontal dressing placed

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Figure 10: Post op picture- 2 weeks

## C. HISTOPATHOLOGICAL INVESTIGATIONS:

Hematoxylin and Eosin stained section shows surface covered with hyperplastic para-keratinized stratified squamous epithelium and fibrous connective tissue exhibiting dense mature collagen fibers in bundles and dense infiltration of lymphocytes and plasma cells. Numerous blood capillaries were present. One focal area shows a spicule of bone and highly cellular inflammatory fibro-epithelial hyperplasia and clinically confirmed as irritation fibroma.

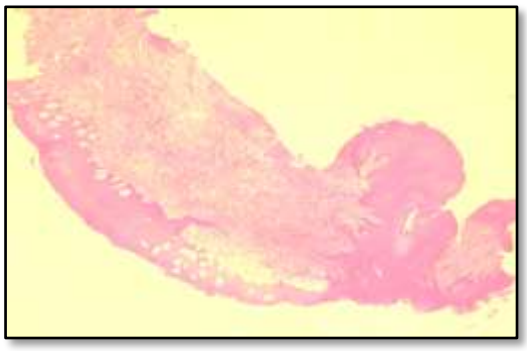

**Figure 11**: Histopathological picture – Fibro-epithelial hyperplasia. (4x)

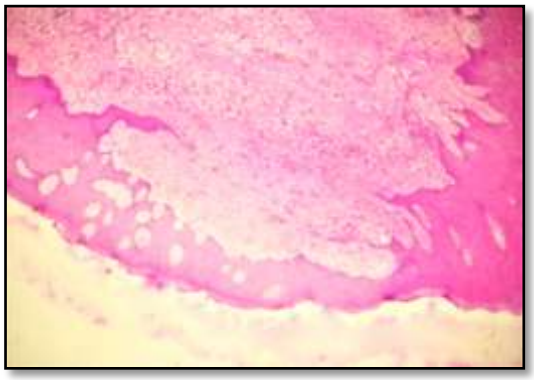

**Figure 11:** Histopathological picture – Fibro-epithelial hyperplasia. (4x)

## D. DISCUSSION:

Almost all lesions in the oral cavity that are called fibromas are not true neoplasms. The fibrous epulis, a focal hyperplasia found on gingiva or alveolar mucosa, is often related to chronic irritation. Therefore, many authors preferred these terms to describe the lesion[5] . In this patient, the involved gingiva appeared to be firm without spontaneous bleeding and the presence of plaque and calculus as well as trauma from occlusion could be the cause for the proliferation of gingival tissue and the chronicity of irritation would have resulted in the fibrotic nature of the gingiva.

Fibro epithelial hyperplasia's when inflamed are covered by uniformly hyperplastic epithelium, with arcading rete pattern when ulcerated. Thin spiky or elongated bilaminar rete processes are seen which penetrates deeply into the connective tissue. This rete hyperplasia is prominent when marked inflammation is present, but in lessinflamed lesions epithelium becomes regular with flat basement membrane or may get atrophied[6] .

Fibrous hyperplasia occurs more frequently in older age groups than do pyogenic granuloma and peripheral fibroma with calcification. Cooke observed the greatest number of cases of fibrous hyperplasia's in the fourth decade[7] whereas Darlington, found the greatest number in the third decade[8] . In our case the individual was a 49-year-old female supporting the studies mentioned above. A substantial overlap exists between the various histological types of reactive focal gingival hyperplastic lesions. The frequent gingival site occurrence supports an assertion that these hyperplastic lesions are the same lesions at different developmental stages.

Daley et al suggested that the vascular component of pyogenic granuloma is gradually replaced by fibrous tissue with time and, hence, diagnosed as a fibrous hyperplasia or fibroma[9] . In addition, Natheer Al- Rawi observed that fibrous hyperplasia on the gingiva not only have the same female gender preponderance but occur in the same age group and site as gingival pyogenic granuloma[10]. Therefore, from the above-mentioned studies, an inference was made that fibrous hyperplasia represents a fibrous maturation of pyogenic granuloma especially in lesions with long duration.

The choice of treatment is the complete excision of the lesion to include the gingival connective tissue base and removal of the causative factors. In order to prevent the recurrence, any defective restoration, open contact, and trauma in

forms of parafunctional habits should also be addressed and treated in addition to removal of fibroma[11].

## E. CONCLUSION:

Identification of any reactive hyperplastic gingival lesion requires the formulation of a differential diagnosis to enable accurate patient evaluation and management. A biopsy will ensure a better and a more ideal treatment plan for the patient and prevent recurrence of these lesions These hyperplastic conditions are considered self-limiting. But since they interfere with form and function, they need to be excised. Also, longstanding hyperplastic lesions in the presence of chronic irritation can get converted to neoplasia.

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