

# A Case of Fibro-epithelial Hyperplasia Diagnosis and Treatment: A Case-Report

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## ABSTRACT

An overgrowth most commonly seen on gingival tissue caused by multiple factors which may be intrinsic or extrinsic in nature. Most commonly encountered local intraoral factors are trauma due to calculus, fractured teeth, chewing and any trapped food particles. In this report a gingival overgrowth was found in interdental area of maxillary right lateral incisor and canine teeth. A similar reactive lesion was also evident on intraoral examination with respect to mid-palatal aspect of right maxillary central incisor. A complete excision of overgrowth was done using 15-number scalpel blade followed by full thickness flap elevation. Excised mass was put in 10% formalin solution and sent for histologic examination. Patient was recalled after 7 days for suture removal. A final diagnosis of fibro-epithelial hyperplasia was made after histo-pathological examination. Without any discomfort and pain post-operatively a complete elimination of gingival overgrowth was achieved with progressive maturation of soft tissues at surgical sites.

**Keywords:-** Collagen, Gingival fibroma, Gingival overgrowth, Granulation tissue

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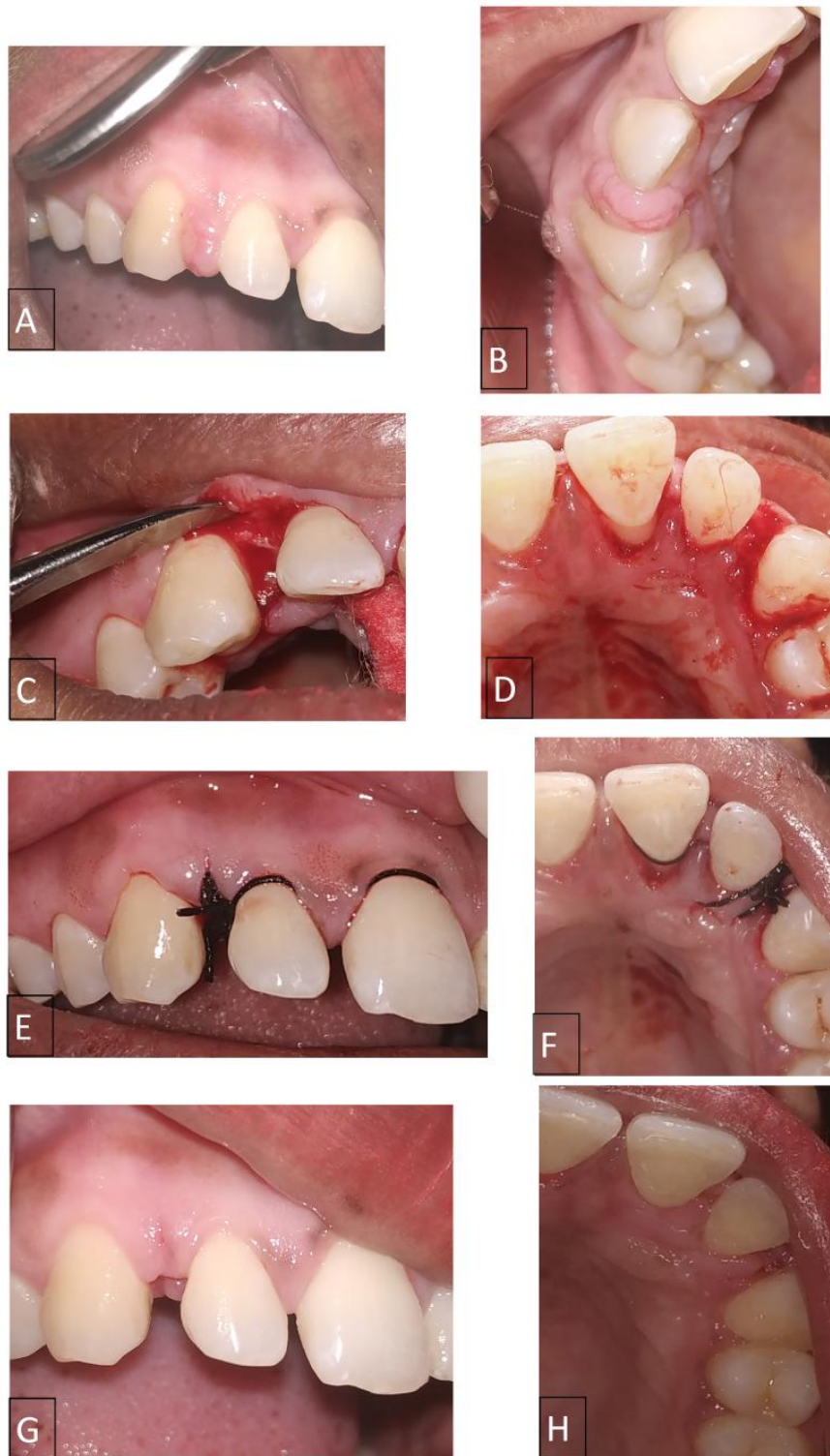
## INTRODUCTION

Oral cavity is a site where tissues encountered with multiple external and internal stimuli that may result into multiple problems like reactive, developmental, inflammatory and neoplastic diseases.<sup>1</sup> They may present as localized or generalized forms.<sup>1,2</sup> When there is any chronic and recurrent injury to tissues it will lead into formation of reactive lesions which are nothing but non-neoplastic nodular swellings.<sup>3</sup> Various forms of reactive lesions like pyogenic granuloma, peripheral giant cell granuloma, fibrous epulis, fibro-epithelial polyp and giant cell fibroma were found in literature commonly evident in gingiva.<sup>2,4</sup> Various names like traumatic fibroma, focal fibrous hyperplasia, fibrous nodule, fibro-epithelial polyp<sup>5</sup> and fibro-epithelial hyperplasia were named for sub-mucosal tissue response to trauma.<sup>6</sup> Soft tissue overgrowth of oral mucosa thought to be reactive inflammatory fibrous hyperplasia than neoplastic in nature.<sup>7</sup> Inflammatory hyperplastic lesions result into traumatic fibroma after they healed.<sup>8</sup> These various lesions appear clinically similar but histo-pathologically they are very different to each other.

## CASE REPORT

A 38-years-old systemically healthy female reported to outpatient department of periodontics with chief complaint of gum swelling in upper right front teeth region from past 3 months. Patient reported that swelling was non-painful and same in size as earlier without any pus discharge from it. On intra-oral examination it was found that an approximately 4×4 mm, sessile gingival overgrowth in proximal aspect extending from marginal gingiva of labial aspect covering interdental area extending to palatal gingiva of maxillary right lateral incisor (LI) and canine as shown in figure-1A, 1B. An ulcerated overlying epithelium in the form of rounded protuberance with yellowish raw area in center was also evident over gingival overgrowth. When palatal aspect was inspected it was found a similar eroded area was started as ulcerated lesion on mid-palatal aspect of maxillary right central incisor (CI) observed in figure-1B. After completion of phase-I therapy patient was recalled and evaluated for the same and it was decided to completely excise the lesion. An intra-crevicular incision was given from mesial line angle of canine to distal line angle of lateral incisor involving the gingival overgrowth as a whole in incision line. Most of the growth excised as a unit and put in 10% formalin for histopathologic examination. In similar fashion intra-crevicular incision was given on palatal aspect but from mesial line angle of canine to mesial line angle of central incisor. A full thickness flap was elevated in both labial and palatal aspect evident in figure-1C, 1D. A complete debridement of infected granulation tissues was accomplished using anterior curettes (Gracey Curettes, HuFriedy, Chicago, IL, USA). An approximately 2mm gingival recession was evident on palatal aspect of maxillary right CI tooth after debridement and before flap closure illustrated in figure-1D. After that flap was closed using 3-0 silk suture (TRUSILK, Healthium Medtech Private Limited, India) with continuous

sling suture technique outlined in figure-1E,1F. Post-operative instructions were given to patient and prescription of amoxicillin 500 mg thrice a day for 5 days and Ibuprofen 400 mg thrice a day for 3 days. Use of a 0.2% Chlorhexidine mouthwash twice daily for a period of 2 weeks was also prescribed. Patients were recalled after 7 days for suture removal depicted in figure-1G,1H. A complete coverage of recession area was observed with respect to palatal aspect of central incisor.



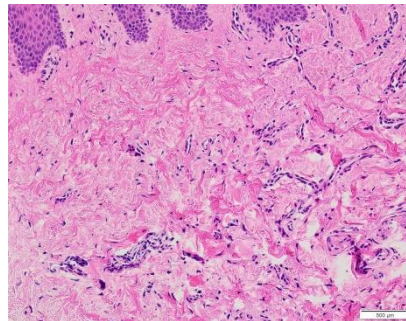
**Figure-1 Clinical picture of case diagnosed with fibro-epithelial hyperplasia with respect to maxillary anterior teeth area**

Fig1A Pre-operative baseline picture showing gingival overgrowth between maxillary right LI and canine tooth interdental area; 1B depicting gingival overgrowth extending upto palatal aspect of interdental area; 1C and 1D

illustrate the labial and palatal flap reflection; 1E and 1F shown primary flap closure after continuous sling suturing; 1G and 1H picture depicts follow-up after 7 days

### HISTOLOGIC REPORT

Prepared section (figure-2) revealed that overlying para-keratinized stratified squamous epithelium of variable and increased thickness (acanthosis) and underlying fibro-collagenous connective tissue stroma. Stroma showed numerous spindle, plump fibroblasts and areas of thick collagen deposition. Mild chronic inflammatory cell infiltrate was also noted along with few endothelium lined small vascular channels. A final diagnosis was made of fibro-epithelial hyperplasia in present study.



**Figure-2 Histologic section of excised overgrowth**

### RESULTS

After 7 days, patient was recalled for suture removal and surgical site was evaluated. A complete well adapted margin was noted on follow-up period without any uneventful condition. Patient was satisfied with the results and no postoperative pain and discomfort encountered by the patient. A perfect closure of margins without any recurrence of the affected areas in the present case was obtained.

### DISCUSSION

Fibrous growth found anywhere in oral cavity but most commonly present on gingiva. Enlargement of soft tissue often presents a challenge to clinician for its correct diagnosis because of variable group of pathologic processes. Soft tissue lesion found in oral cavity shows a kind of irritation or low-grade injury like trapped food, chewing, calculus, fractured teeth and iatrogenic factors.<sup>9</sup> Diagnosis can be made on the basis of clinical and radiographic features but final diagnosis is by histopathologic examination which is ultimate key for final diagnosis.<sup>10</sup> Clinically to describe any localized overgrowth on gingival tissue the term frequently used was epulis. According to Cooke et al.<sup>11</sup> all the pedunculated swelling called by name of 'polyp' where maximum number of lesion occurred on mucosa in occlusion line, an area subject to masticatory trauma. Due to local irritation by caries/restorations with rough margins and calculus leads into appearance of gingival overgrowth in interdental areas also. But sometime it affects other areas also like lower lip, hard palate, tongue and edentulous alveolar ridge.<sup>12</sup> Immuno-histochemical stains cells of this lesion vimentin-positive only which suggest fibroblast phenotype.<sup>13</sup> Treatment of choice for such kind of lesion is simple excision procedure using scalpel. Trajtenberg and Adibi<sup>14</sup> suggested that laser excision is an alternative for treating oral soft tissue lesions with advantage of less post-operative discomfort, faster healing and avoidance of post-operative medications. Fibrous hyperplasia is a benign soft tissue response to local irritants. Clinically it present as a well-demarcated exophytic mass. Surface of lesion can be normal to white or reddish in colour depending on whether the lesion surface is keratotic, ulcerated or both or neither.<sup>15</sup> Its consistency can be from soft to firm on palpation. Most commonly seen features on histologic examination in fibrous hyperplasia lesion are a mass of hyperplastic connective tissue with less or no inflammatory cells. Epithelium of surface ranges from normal to acanthotic, keratotic, ulcerated or combination of features.<sup>15</sup> A conservative approach is recommended like complete removal of all irritants, if problem is not resolved then ultimate treatment of this lesion is surgical excision with elimination of all local irritants to prevent recurrence. A long follow-up is required to monitor its reoccurrence as this lesion has tendency of reoccurrence.

### CONCLUSION

A complete elimination of gingival overgrowth with complete attachment of gingival margins with underlying hard tissues without any recession obtained after procedure. Patient did not felt any pain, discomfort post-operatively. A complete attachment of palatal soft tissues was observed without any recession and sulcus depth remains to normal range post-operatively.

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