

Management of a Case of Fibroma in a Systemically Compromised Patient

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ABSTRACT

Fibromas are considered the most common benign soft tissue growth in the oral cavity arising from the gingival connective tissue or from the periodontal ligament. Surgical excision along with the removal of causative irritants remains the treatment of choice. A 70-years old patient reported to this institution with a swelling in the upper front tooth region with no history of trauma or possible irritants. The lesion started growing gradually in size along with moderate pain. Following palliative treatment for 7 days, excision of the growth was done using electrosurgical unit. To achieve better haemostasis gelatin sponge was used. Uneventful healing was observed in 7 days.

Key Words: electrosurgical unit, Fibroma, fibro-epithelial hyperplasia, gelatin sponge (gelfoam).

INTRODUCTION

Oral mucosa is consistently subjected to various stimuli (external and internal) that can lead to the development of the localized inflammatory hyperplasia.¹ Histologically these changes in the mucosal tissues have been identified as hypertrophy (an increase in the size of the cellular elements making up the gingivae) and hyperplasia (an increase in the number of the cellular element). Fibromas are considered the most common benign soft tissue growth in the oral cavity.² They may arise from the gingival connective tissue or from the periodontal ligament.³ It is stated that fibroepithelial hyperplasia is a better term to 'fibroma' which wrongly implies to a neoplastic lesion.⁴ The term 'Fibro epithelial hyperplasia' was given by Deley et al in 1990.⁵ Fibroepithelial hyperplasia refers to a reactive localized tissue response. It is also known as irritational fibroma, oral fibroma or fibromatosis, focal fibrous hyperplasia, inflammatory fibrous hyperplasia, fibrous nodule or fibroepithelial polyp. It has a prevalence rate of 1.2 percent.⁶ Reactive lesions of the gingiva have been classified on the basis of their histology. Kfir et al⁶ have specifically classified reactive gingival lesions into pyogenic granuloma, peripheral giant cell granuloma, fibrous hyperplasia, peripheral fibroma with calcification.

Etiopathology⁷

1. Chronic trauma due to poorly fitting dental prostheses
2. Faulty restoration
3. Food lodgement
4. Dental plaque and Calculus
5. Over-contoured restorations
6. Acute or chronic lesions due to bites or fractured teeth
7. Poor plaque control that results in mucosal irritation, inflammation and proliferation

Clinical Features

This lesion has a predilection for females, occurs in patients older than 30 years. It occurs more commonly in the buccal mucosa along the occlusal line followed by labial mucosa, gingiva and palate. The surface appearance is variable from nonulcerated smooth to ulcerated mass. Lesion size varies from a few millimeters to several centimeters. It can vary from painless pedunculated or sessile masses in different colors, from light pink to red.⁸

Surgical excision along with the removal of causative irritants remains the treatment of choice.⁹

CASE REPORT

A 70-years old female patient came to the Department of Periodontology in Kothiwal Dental College & Research Centre with a chief complaint of swelling in the upper front tooth region from past 1 month. The lesion started as a small nodule which gradually increased in size. Lesion was associated with pain which was gradual in onset,

moderate, intermittent, localized and aggravated on mastication and touch which lasted for few minutes and then subsided on its own. She was Hypertensive (180/90 mm/Hg), diabetic (RBS of 342mg/dl and Hba1c value of 8), suffers from jointpain, has cardiac problem like premature arterial and ventricular contractions. for which she was under various medications such as antihypertensive drugs, antidiabetic drugs, antianxiety drugs and antibacterials. Dental and family history was non-contributory.



Figure 1: Pre-operative clinical view

Upon intraoral examination, an exophytic growth on the labial aspect of maxillary incisor was seen which was spherical in shape measuring approximately 15 X 13 mm in size. The mass had well defined borders with central erythematous area with the overlying mucosa white/pale in color(Figure 1). On palpation, the surface of overlying mucosa was smooth and the mass was firm in consistency. It was tender on palpation and slight bleeding was present on touch. On percussion, no tenderness was present in adjacent teeth. The growth appeared unilateral (Figure 2)



Figure 2: Pre-operative clinical view showing unilateral pattern of growth

Diagnosis

A differential diagnosis of Pyogenic granuloma, Fibrous epulis, Fibroepithelial polyp was made based on the clinical features. A provisional diagnosis of irritational fibroma was made and the patient was subjected to a thorough medical examination.

Treatment procedure

The patient was advised antibiotics (Amoxicillin 500mg + Clavulanic acid 125mg) thrice a day, along with analgesics (Aceclofenac 100mg + Paracetamol 325mg) to be taken only on pain for 3 days prior to surgery. Scaling was done. After 1 week, the patient was recalled for evaluation.

After 2 weeks, the area (#11 region) was anaesthetized with 2% lignocaine of 1:100,000 adrenaline. After the affected area was anaesthetized, the growth to be excised was assessed with the help of a periodontal probe. It was then held with a tissue forcep and excised with the help of the electrosurgical unit. (figure 3&4)



Figure 3: The electrosurgical unit



Figure 4: Excision of the growth with electrocautery unit



Figure 5: Use of ball tip for coagulation



Figure 6: Site after removal of the growth



Figure 7: Application of gelfoam (gelatin sponge)



Figure 8: Coe pak placement

After the growth was excised the area was properly checked for any other etiology for the occurrence of it (Figure 6). To achieve haemostasis firstly a ball tip of the electrosurgical unit was used followed by application of gelfoam (gelatin sponge) (Figure 5 & 7). Aluminium foil was placed over the area and coepak was given (Figure 8). The excised specimen was stored in formalin and sent for histopathological examination for confirmed diagnosis.

The patient was recalled for follow up on 7th day, 14th day, 1 month and 3 months. (Figure 9)



Figure 9: Post-operative clinical view after 7 days and 3 months respectively

Histopathology

The excised tissue was sent for histopathological examination which revealed thick parakeratinized stratified squamous epithelium overlying a fibrocellular connective tissue stroma. Epithelium shows long rete ridges penetrating upto the deeper connective tissue stroma. Epithelium connective tissue junction is intact. Connective tissue has densely arranged collagen fibers in association with fibroblasts, numerous endothelial lined blood vessels filled with RBCs and infiltration of dense chronic inflammatory infiltrate cells predominantly consisting of lymphocytes and plasma cells. The histopathological features were suggestive of inflammatory fibroepithelial hyperplasia (Figure 10).

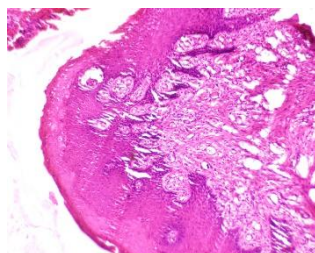


Figure 10: Histopathology of the biopsy specimen

DISCUSSION

Fibrous growths of the oral soft tissues are fairly common and include a diverse group of reactive and neoplastic conditions. Long standing hyperplastic lesions in the presence of chronic irritation can get converted to neoplasia. In the present case there was no history of trauma reported by the patient. The growth may be influenced by the serum levels of certain endocrine hormones as the patient was diabetic.¹⁰ Presence of plaque and calculus may also act as aggravating factors.¹⁰ Fibroma are more common in the 2nd and 3rd decade of life. The study of Ramu and Rodriguesshowed a predominance of focal fibrous hyperplasia in the 4th decade which coincides with this case.¹¹ As the patient was hypertensive, to reduce the chance of post-operative bleeding electrosurgery was used. Its advantages over other modalities include, immediate and consistent haemostasis resulting in reduced operative blood loss, rapid dissection and precise tissue cutting with self-disinfecting tip, scar free wound healing, easy contouring of tissue in areas of difficult access.¹² Gelatin sponge (gelfoam) was also used to control bleeding as it holds blood and provides a matrix for clot formation and granulation tissue to form. It can be applied dry or moistened with saline or thrombin. Little to no tissue reaction is seen and it fully absorbs within 4-6 weeks.¹³ In this case, healing took around 7 days and no post-operative complications were seen.

CONCLUSION

Fibroepithelial hyperplasia as a disease entity comprise a number of clinical features. Though it is a benign neoplastic enlargement one cannot neglect its potential complications. A proper diagnosis should be made on the basis of thorough case history, clinical examination, radiographic assessment and histopathology. Among the different surgical options available the goal is to develop a treatment option with the fewest complications for the patients.

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