



TRAUMATIC FIBROMA – A CASE SERIES

Periodontology

Dr. Misha Rose Mathew*

Postgraduate Department of Periodontology A J Institute of Dental Sciences Mangalore
*Corresponding Author

Dr. Nandini Manjunath

HOD and Professor, Department of Periodontology A J Institute of Dental Sciences, Mangalore

ABSTRACT

This article addresses the clinical presentation, diagnosis, histological features, and treatment of two cases of fibroma. Background: Fibromas are proliferative fibrous lesions of the gingiva and oral mucosa that may cause esthetic and functional problems. Fibrous hyperplasia and fibroepithelial hyperplasia are histological variants of these nonneoplastic lesions. Case report: this Case demonstrated an overgrowth in the lower back tooth region, the growths was pale in color, sessile, painless, and firm in consistency. Lesion caused discomfort during chewing of food. Thus, the lesions were excised using diode laser in continuous mode and sent for histopathological assessment. Conclusion: The lesion was a result of trauma/chronic irritation and arise from cells of oral mucous membrane or periosteum.

KEYWORDS

Diode laser, Fibroepithelial hyperplasia, Traumatic fibroma

INTRODUCTION

Localised overgrowths are a prevalent occurrence in the oral mucosa. True neoplasms are extremely rare, and the majority of them are hyperplastic [2]. An Inflammatory hyperplastic lesion may be defined as "an increase in the size of an organ or tissue due to an increase in the number of constituent cells, as a local response of tissue to injury [3]. The oral cavity may develop a variety of localised reactive lesions, including focal fibrous hyperplasia, pyogenic granuloma, peripheral giant cell granuloma, and peripheral ossifying fibroma [1].

As the lips represent the boundary between two different tissues, the skin and mucosa, there is a higher risk of development of modifications than in other places, making them the most common site for a variety of benign and malignant lesions [5]. The inflammatory hyperplastic lesion's final stage of healing is fibrous hyperplasia [6]. Several terminology, including Irritation Fibroma, Irritational Fibroma, Fibrous Hyperplasia, Focal Fibrous Hyperplasia, Traumatic Fibroma, Localised Fibrous Hyperplasia, and Fibro epithelial Polyp, have been used in oral pathology to characterise a non-neoplastic fibrous lesion of the oral mucosa [7]. It is a focus of hyperplastic fibrous connective tissue representing a reactive response to local irritation or masticatory trauma [8].

The percentage of adults who have fibroma is about 1.2 [9]. It is caused by a chronic healing process that includes the production of scar tissue and granulation tissue, resulting in a fibrous submucosal mass [9]. However, other sites, including the labial mucosa, tongue, and gingiva, are also possible for fibromas. The buccal mucosa's occlusal line is the site where they are most frequently found. The most common location of fibroma is along the occlusal line of the buccal mucosa although other locations, such as the labial mucosa, tongue, and gingiva, are possible.

Clinically, Asymptomatic, moderately hard, smooth-surfaced, pink, sessile, or pedunculated nodules are the primary manifestation of fibroma [11]. They show as broad-based lesions that are lighter in colour than the normal tissue around them. The surface is frequently white due to hyperkeratosis, and there may be surface ulceration brought on by subsequent trauma. Fibromas have a maximum diameter growth potential of 10 to 20 mm [12]. Surgery is used to remove it, and the cause of the irritation must also be stopped. The results of a conservative excisional biopsy are diagnostic and curative [13]. Recurrences are uncommon and may be brought on by consistent trauma to the same area. There is no cancer risk associated with this lesion [1].

It is treated by surgical excision, and also the source of irritation must be eliminated. Conservative excisional biopsy is curative and its findings are diagnostic [13]. Recurrences are rare and may be caused by repetitive trauma at the same site. This lesion does not have a risk for malignancy [14]

A 63-year-old female patient reported to Department of Periodontology, A J Institute of dental sciences, with the chief complaint of swelling in the left corner cheek. The lesion was first noticed 6 months ago, which increased in size gradually. She had no relevant medical or dental history as evidenced with a comprehensive case history reported, any history of dental and/or facial trauma was not reported. The lesion was found to be painless. Her oral hygiene was acceptable with an OHI-S score of 1.4. She had not undergone any dental procedures in the past 1 year. Chewing and normal oral function have been hampered by growth.

Examination Of The Soft Tissues

Intraoral inspection showed a single, painless, sessile, well circumscribed mass with smooth surface. On palpation, it was firm in consistency, and lobulated swelling measuring approximately 5*6mm in its maximum diameter in relation to tooth numbers 35 and 36 on the lower left side of the buccal mucosa associated with sharp cusp leading to traumatic occlusion with the left side (Fig.A)

MANAGEMENT

An informed consent was taken from the patient as she was informed about the treatment procedure. Routine blood investigations were performed and they were within the normal range. After performing initial periodontal therapy and occlusal corrections which included selective cuspal grinding, the lesion was excised completely from its base using a soft tissue diode laser in pulse mode with continuous wavelength and 3-3.5 W power for 3*60 seconds under local anesthesia and with the use of protective armamentarium. The tip of the fibre was in contact with the edges of the lesion during surgery. No suturing was done. (Fig. B).

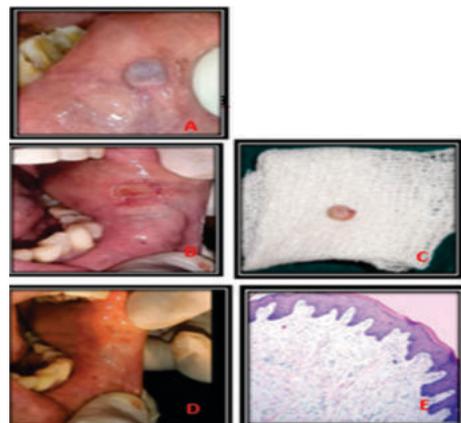


Figure C Shows The Fibrous Tissue Following Excision. Three-month Follow-up Shows Complete Healing With No Complication (fig. D).

CASE REPORT

Differential Diagnosis

Hyperplastic fibroma, mucocele, peripheral giant cell granuloma, peripheral ossifying fibroma, pyogenic granuloma, papilloma, were considered in differential diagnosis.

Histopathology

H&E stained sections showed keratinized stratified squamous type of epithelium and connective tissue. Epithelium was found to be hyperplastic. Connective tissue contained numerous blood vessels with some surrounded by plump and proliferating endothelial cells. Dense chronic inflammatory infiltrate comprising of lymphocytes, plasma cells, and macrophages is present (Fig. E).

DISCUSSION

Some of the oral lesions, such as irritational fibroma and mucocele, caused by oral habits such as lip biting / sucking, those associated with traumatic occlusions, and local etiological factors have been mentioned in the literature. Fibroma is the result of a chronic repair process that involves the formation of granulation tissue and scars resulting in a fibrous sub-mucosal mass. [13] Parkavi et al 2018 also in their case report presented diagnosis, histological aspects and surgical management of irritational fibroma due to local trauma. A study was performed by Santiago Torres Domingo et al. in 2008 to examine the occurrence and form of the most common oral mucosal benign tumors among 300 patients which revealed 153 (53.3%) histologically diagnosed as fibroma, indicating that this is the most common oral cavity benign tumor. [14]

Reactive gingival lesions have been classified into pyogenic granuloma, peripheral giant cell granuloma, fibrous hyperplasia, and peripheral fibroma with calcification by Kfir et al [11]. As the most common non-neoplastic growth in the oral cavity, much has been written about the fibroma. The clinical presentation and epidemiology of most non-neoplastic growths in the oral cavity are quite similar; thus, identification is dependent on histopathological differentiation. Histologically, these lesions vary from granulation tissue to mature scar-like tissue, depending on age and vascularity. Lesions are collagenous and composed of mature fibrous tissue with prominent vascular pattern. Epithelial changes also correlate with the lesion's age and degree of inflammation.[1]

Fibroepithelial hyperplasias, when inflamed, are covered by uniformly hyperplastic epithelium, with arced rete pattern when ulcerated. The formulation of a differential diagnosis requires identification of any reactive hyperplastic gingival lesion to enable accurate patient evaluation and management. It is important to differentiate these lesions clinically and histologically from precancerous, developmental, and neoplastic lesions.[1]

Differential diagnoses include gingival non-Hodgkin's lymphoma angiosarcomas, metastatic tumors in the oral cavity, Kaposi's sarcoma, and hemangioma[12] In the present case series, patients did not reveal any specific history of trauma to oral mucosa. Clinical findings suggest that occlusal forces might be the cause of traumatic fibroma in these cases.

CONCLUSION

Connective tissue response to various levels of gingival stimulation may be the cause of the many histological patterns seen in reactive hyperplasia. Therefore, it is crucial to distinguish between hyperplasia and neoplasia since neoplasias are not self-limiting situations and long-lasting hyperplastic lesions might transform into neoplasia in the context of persistent irritation. In addition to the physical features of the lesion, the patient's demographics, the existence of concomitant symptoms, associated systemic illnesses, and the location and growth patterns of the lesion all provide information that can be used to properly identify and treat them.

REFERENCES

1. Navnita Singh, Shivaprasad Bilichodmath, Savita Sambhashivaiah . Traumatic Fibroma: A Case Series. Journal of Health Sciences & Research, January-June 2016;7(1):28-31.
2. Esmeli T, Lozada-Nur F, and Epstein J. "Common benign oral soft tissue masses," Dental Clinics of North America, vol. 49, no. 1, pp. 223-240, 2005. 2. Carranza's Clinical Periodontology 11 ed.
3. Baumgartner JC, Stanley HR, Salomone JL. Peripheral ossifying fibroma. J Endodont 1991;17:182-185.
4. Kfir Y, Buchner A, Hansen LS. Reactive lesions of the gingival – A clinicopathologic study of 741 cases. J Periodontol 1980;51:655-661.
5. Kendrick F, Waggoner WF. Managing peripheral ossifying fibroma. J Dent Child 1996, 63:35-138.
6. Daley TD, Wysocki GP, Wysocki PD, Wysocki DM. The major epulides:

clinicopathological correlations. J Can Dent Assoc 1990;56:627-630.

7. Dieter K, Andreas A, Christos C. Reactive hyperplasias, precancerous and malignant lesions of the oral mucosa. JDDG2008;6:217-232.
8. Ramzi C, Vinay K, Tucker C. Robbins pathologic basis of disease. 6th ed. W.B. Saunders. 1999.
9. Mohammed NA, Chandrasekaran SC, Mohan V. Fibroma of the Gingiva: a case report of a 20 year old lesion. Int J Contemp Dent 2010;1:107-109.
10. Kfir Y, Buchner A, Hansen LS. Reactive lesions of the gingiva. A clinic-pathological study of 741 cases. J Periodontol 1980; 51:655-661.
11. Gustafson BA, Greenspan JS. Multiple polypoid conditions of the oral mucosa. British J Oral Surg 1974;12:91-95.
12. Riya V, Amitha R, Rahul B, Biju T, Nishita L. Philip. Fibroma – A misnomer: case Series. NUJHS 2015;5(4):83-87.
13. Pedrona IG, Ramalhob KM, Moreirac LA, Freitasd PM. Association of two lasers in the treatment of traumatic fibroma: Excision with Nd: YAP laser and Photobiomodulation Using InGaAlP: A case report. JOLA. 2009; 9: 49- 53.
14. Torres-Domingo S, Bagan JV, Jiménez Y, Poveda R, Murillo J, Díaz JM, et al. Benign tumors of the oral mucosa: A study of 300 patients. Med Oral Patol Oral Cir Bucal. 2008; 13: E161-E166.