

Giant Oral Irritational Fibroma Secondary to Childhood Trauma: Case Report

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ABSTRACT:

Irritational fibromas are reactive lesions by which the body defends itself against constant irritation. It is most commonly observed in old age groups. This is mainly attributed to irritation by ill-fitting prosthodontic appliances. However, in the herein demonstrated case report, we present a case of a young adult who suffered from a giant irritational fibroma arising from the upper labial mucosa. The lesion had a history of starting 15 years earlier. Further history indicated the cause to be a childhood trauma to deciduous teeth. The size of the lesion was unexpectedly large compared to the classical picture of reactive lesions. The case received the appropriate investigations through radiography and biopsy; together with history and staged treatment planning, the case was successfully managed. The report emphasizes the important role of detailed history in reaching a diagnosis. It also clarifies that it is not the size of the lesion that differs for the diagnosis, but it is rather the clinical behavior.

Keywords: Collagen fibers; Dental trauma; Dilaceration; Inflammatory fibrous hyperplasia; Path of eruption.

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INTRODUCTION:

Fibromas are benign tumors arising from fibrous connective tissue cells. They, normally, originate as a protective mechanism in reaction to trauma or irritation. Therefore, they are called reactive lesions, reactionary hyperplasia, inflammatory fibrous hyperplasia (IFH), or irritational fibromas. They represent one of the most frequently encountered reactive hyperplastic lesions; where their prevalence ranges between 19.1% to 71.1% of reactive hyperplastic lesions. ^[1]

Being reactive, its diagnostic clinical picture is observed as a firm sessile lesion in close proximity to a source of trauma or having a history of being chronically traumatized. ^[2] Furthermore, fibromas are mostly reported in the buccal mucosa in patients at their fourth decade of life. ^[2] However, in this report, the presented case has a history returning back to childhood.

CASE DESCRIPTION:

A 23-year-old, systemically healthy, male patient presented with a missing upper right

front tooth that dentists refused to restore due to a related swelling in the upper lip. He reported having this asymptomatic swelling in the inner side of the upper lip since he was 8 years old after the eruption of the malposed upper left central incisor. Since then, the swelling kept progressing in size. The patient attributed the malposition of the maxillary left central incisor to a trauma that he received in the maxillary anterior teeth when he was 3 years old. Afterwards, at the time of maxillary permanent incisors eruption, the right central incisor did not erupt at all; while the left erupted with its incisal edge directed to the labial mucosa. Otherwise, the patient had no significant medical, dental or family history.

Extraoral examination showed no abnormalities with impalpable lymph nodes. On the other hand, intraoral examination revealed a solitary well-defined, roughly cylindrical, firm, non-fluctuant sessile swelling of a diameter 3 cm and 4 cm height, in the upper labial mucosa, opposite to the labially erupted

upper left central incisor; and covered by normal pink mucosa. (Figure 1)

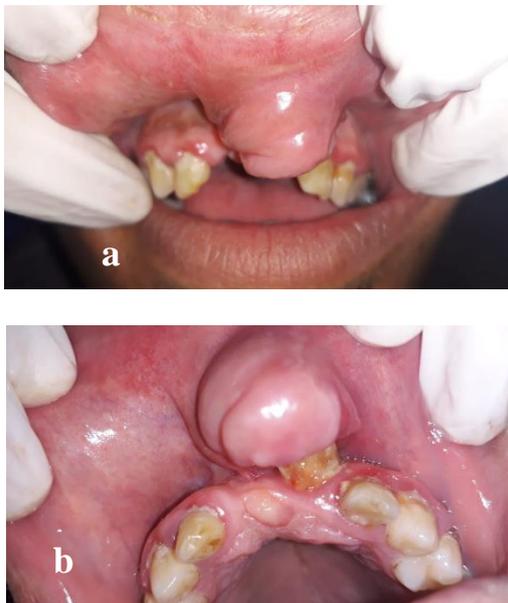


Figure 1. Pre-operative pictures of the lesion from a (a) frontal view; and (b) occlusal view showing the labially malposed left central incisor. The incisal 2/3 of offending tooth is totally surrounded by the lesion; obscuring the incisal 2/3 of the crown of the tooth in the photograph.

The periapical radiograph of the maxillary anterior region showed missing right central incisor and a dilacerated root tip of the left central incisor (Figure 2a).

The lesion of the upper labial mucosa was tentatively diagnosed to be an irritational fibroma as a reaction to chronic irritation by the labially directed incisal edge of the maxillary left central incisor.



Figure 2. Pictures of the offending tooth: (a) the periapical radiograph of the upper incisor area; and (b) the tooth after extraction showing its dilacerated apex.

RESULTS:

The offending tooth was extracted showing dilaceration of the apical 1/3 of the root (that is believed to be the cause of the deviation of its eruption pathway) (Figure 2b). After 2 months of extraction, the now smaller and less firm lesion was surgically excised. Elliptical incisions were

performed followed by blunt dissection in order to keep enough healthy covering mucosa for the surgical wound coverage and suturing.

Histopathologic examination revealed bundles of collagen fibers and vasodilated blood vessels in the connective tissue that is covered by hyperplastic epithelium (Figure 3a). Follow up of the lesion was continued till complete healing after 1 month of the excision (Figure 3b).



Figure 3. Post-operative pictures: (a) the histopathological picture of the specimen; and (b) the upper labial mucosa after healing.

DISCUSSION:

Despite the large size of the lesion, its relation to a chronic irritant together with its slow growth over long period of time categorized it as a reactive lesion. It fits the known picture of irritational fibromas in being asymptomatic, dome-shaped and smooth surfaced. [3] Although the lesion was diagnosed tentatively, other lesions may present with similar clinical picture including peripheral ossifying fibroma, peripheral odontogenic fibroma and giant cell fibroma. [4] However, the history of childhood trauma and the clinically apparent cause of chronic irritation by the labially erupted incisor directed the diagnosis towards irritation fibroma.

Of the widely reported cases of irritational fibroma, the herein presented case is special in being a consequence of a childhood trauma which consequences were not approached for 15 years (since 8 years of age). In this case, trauma to the deciduous teeth is believed to not only cause abortion of the right permanent incisor tooth bud

formation and maturation; but to deform the apical part of the left permanent incisor. As it is known that the tooth eruptive force is created at the root apex ^[5], the whole tooth started to move occlusally in the same inclination of the deformed apex. This caused the crown of the tooth to erupt directly towards the upper labial mucosa causing its irritation. With long-term irritation (since the eruption of the tooth till the patient presented at the age of 23), the tissues of the labial mucosa protected itself by forming a thick fibrous tissue in the form of (Irritational fibroma).

Although fibromas have higher incidence at old age groups due to friction of ill-fitting prostheses, it arises at any age as a protective reaction of tissues against chronic irritation. ^[1] Persistent low-grade irritation over long years in the presented case stimulated chronic inflammatory reaction in which endothelial cells proliferate, together with chronic inflammatory cells and fibroblasts. The continuously over-growing granulation

tissue manifests clinically as reactive hyperplasia. ^[4]

Therefore, the microscopic picture of the specimen in the presented case showed a typical picture of an irritational fibroma in the form of fibrous connective tissue containing collagen fibers mixed with fibroblasts and dilated blood vessels and covered by stratified squamous epithelium.

^[2] This histopathological picture showed absence of stellate cells (observed in giant cell fibroma), immature bone tissue (detected in ossifying fibroma) and remnants of dental lamina (spotted in odontogenic fibroma). ^[4] Thereby, the tentative diagnosis was corroborated and the final diagnosis was confirmed to be an irritational fibroma.

Treatment of these lesions depend on their conservative excision with favorable prognosis of low rate of recurrence. ^[2]

Treatment options include laser ablation, cryotherapy and surgical enucleation. Of all these options, surgical excision is the most widely used technique owing to being

simple and inexpensive.^[2] Reactive lesions are almost never reported to recur unless the cause of trauma was not completely eradicated.^[6] Therefore, to avoid recurrence, the offending irritant has to be removed first and the lesion then excised.^[3] So, in the herein reported case, the cause of irritation -namely the malposed central incisor- was eliminated first followed by a period of follow up of 2 months to allow for the regression of the lesion. Afterwards, the residual lesion was excised.

SUMMARY AND CONCLUSION:

Reactive lesions can be extensively large before the patient seeks treatment due to being asymptomatic. This case report discusses a case of irritational fibroma having an abnormally large size. Detailed history together with clinical examination provided the needed information for diagnosis and planning an effective treatment plan.

REFERENCES:

[1] Dutra KL, Longo L, Grando LJ, Rivero ERC. Incidence of reactive

hyperplastic lesions in the oral cavity: a 10 year retrospective study in Santa Catarina, Brazil. *Braz J Otorhinolaryngol* 2019;85:399–407. <https://doi.org/10.1016/j.bjorl.2018.03.006>.

[2] Valério RA, de Queiroz AM, Romualdo PC, Brentegani LG, de Paula-Silva FWG. Mucocele and fibroma: Treatment and clinical features for differential diagnosis. *Braz Dent J* 2013;24:537–41. <https://doi.org/10.1590/0103-6440201301838>.

[3] Panta P. Traumatic fibroma. *Pan Afr Med J* 2015;21:8688. <https://doi.org/10.11604/pamj.2015.21.220.7498>.

[4] Lapitskaya A, Cahuana-Bartra P, Brunet-Llobet L, Miranda-Rius J. Oral irritation fibroma associated with the pathological migration of a primary tooth. *BMJ Case Rep* 2022;15. <https://doi.org/10.1136/bcr-2022->

249369.

- [5] Proffit WR, Frazier-Bowers SA. Mechanism and control of tooth eruption: Overview and clinical implications. *Orthod Craniofac Res* 2009;12:59–66. <https://doi.org/10.1111/j.1601-6343.2009.01438.x>.
- [6] Durmaz EO. Denture-induced fibroma. *Clin Exp Dermatol* 2014;39:763–5.