

Irrational Fibroma in the Central Dorsum of the Tongue: A Case Report of a Rare Location

Abdulaziz A Alwakeel¹, Muhannad Alatawi², Ahmed Alatawi³, Ibrahim Alatawi⁴, Safaa Albalawi⁵,
Khulud Albalawi⁶, Faten Albaqawi⁷

¹Senior registrar Oral medicine, Tabuk specialist dental center , Tabuk health cluster, Tabuk city, Saudi Arabia

^{2,3}General dentist, Tabuk specialist dental center , Tabuk health cluster, Tabuk city, Saudi Arabia

⁴Dental hygienist, Tabuk specialist dental center , Tabuk health cluster, Tabuk city, Saudi Arabia

^{5,6,7}Dental assistant, Tabuk specialist dental center , Tabuk health cluster, Tabuk city, Saudi Arabia

Abstract

Introduction:

Oral fibroma, also known as traumatic fibroma, irritational fibroma, or focal fibrous hyperplasia, is a benign exophytic lesion that typically arises following trauma. Fibroma is the most common benign soft-tissue neoplasm in the oral cavity.

Aim of Reporting This Case:

The aim of reporting this case is to highlight the unusual location of a traumatic fibroma on the central dorsum of the tongue.

Case Presentation:

A 55-year-old patient presented to the oral medicine clinic with a lesion on his tongue that developed after drinking a hot liquid. Clinical examination revealed a smooth, round, nodular lesion located in the central area of the dorsum of the tongue, measuring approximately 0.5 × 0.3 cm in diameter. An excisional biopsy was performed, which revealed a nodular lesion lined by papillary keratinized stratified squamous epithelium. The underlying connective tissue showed thick fibrous bundles, giant fibroblast cells, and scattered small blood vessels. So, the final diagnosis for this case was irritational fibroma.

Conclusion:

This case demonstrates an oral fibroma in an unusual location on the dorsum of the tongue following the consumption of a hot liquid. Oral fibroma is a benign neoplasm, and trauma is the most common cause. Increased awareness of this lesion is essential, as it is one of the most common benign soft-tissue neoplasms in the oral cavity.

Keywords: Tongue , oral fibroma , dorsum of tongue

Introduction:

Traumatic fibroma is the end stage of an inflammatory hyperplastic lesion [1]. Sharp teeth or bone, trauma related to toothbrushes, intra-oral devices, or chronic biting are some of the common injury-causing agents.

Fibroma is generally preceded by either trauma or chronic irritation [2]. that causes a reactive hyperplastic lesion. The oral cavity tissues respond to the trauma, and an unruly repair process begins. Finally, excessive fibrous connective tissue is

produced, leading to the formation of a nodule or mass [3].

The aim of reporting this case is to highlight the unusual location of a traumatic fibroma on the central dorsum of the tongue.

Case presentation:

A 55-year-old patient presented to the oral medicine clinic with a lesion on his tongue that developed after drinking a hot liquid. Clinical examination revealed a smooth, round, nodular lesion in the central area of the dorsum of the

tongue, measuring approximately 0.5×0.3 cm in diameter, as shown in Figure 1. An excisional biopsy was performed, revealing a nodular lesion lined by papillary keratinized stratified squamous epithelium. The underlying connective tissue showed thick fibrous bundles, giant fibroblast cells, and scattered small blood vessels, as shown in Figures 2 and 3. So, the final diagnosis for our case irritational fibroma. Figure 4 shows the postoperative area one year later, with no signs of recurrence. So, The final diagnosis for this case was irritational fibroma.



Figure 1: shows nodular lesion in a central area in the dorsum of tongue

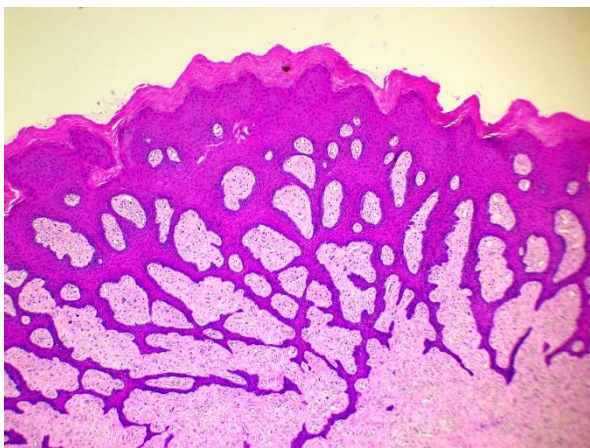


Figure 2: histopathological picture shows wedge shape biopsy lining by papillary ortho keratinized stratified squamous epithelium and shows the connective tissue area has dens fibrotic tissue

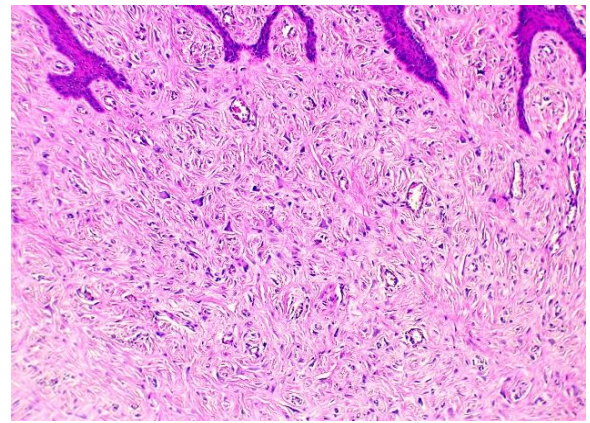


Figure 3 : dens fibrous bundle with giant fibroblast cells presented in this histopathological picture



Figure 4: shows the area of lesion post operative after 1 year with no recurrence.

Written and verbal consent were obtained from the patient to publish his clinical and histopathological images for scientific purposes. Additionally, IRB approval was granted by the Tabuk Institutional Review Board under protocol No. TU-077/024/269 for this case report.

Discussion:

Oral traumatic fibroma is usually an asymptomatic, single nodular with well-circumscribed margins. It could be seen as a pedunculate or sessile lesion [4]. It may increase in size over time, generally at most 1 cm in diameter. The surface of the lesion is usually smooth, and, in some cases, the ulcer may present due to recurrent trauma. The most ordinary sites include the buccal mucosa, tongue, gingiva, and lips [5]. The presented case has the same clinical presentation, but it is presented in the dorsum of the tongue.

According to Barker and Lucas, traumatic fibromas exhibit a collagen arrangement pattern

depending on the lesion site and the amount of irritation. There are two forms of fibroma: (a) radiating and (b) circular pattern. The authors mentioned if there is a greater degree of trauma, a radiating pattern appears in sites of fixed tissue in nature (e.g., palate), but in less amount of trauma, the circular pattern occurs in flexible sites (e.g., cheeks) [6].

Bouquot and Gundlach determined that traumatic fibroma was the most common soft tissue neoplasm presenting in the oral cavity. [7]. Similarly, in 2008, Santiago Torres Domingo et al. concluded that fibroma is the most common benign neoplasm in the oral cavity [8].

The treatment of traumatic fibroma usually excision by regular surgical scalpel, other options, such as laser and electrocautery can be other options for treatment [9].

The buccal mucosa, labial, and lingual surfaces were the predilection sites. The study also revealed no prominent difference in the incidence rate between the sexes.

However, data regarding the occurrence of oral diseases in subsequent retrospective studies may vary from country to country [10, 11].

Several groups of pathologic processes can increase tissue size in the oral cavity. Thus, those lesions often present as a diagnostic challenge. Within these lesions, a reactive hyperplasia group that develops in response to a chronic, recurring tissue trauma stimulates an exuberant or excessive tissue repair response [12].

There were 3 cases; Rathva VJ reported a case of A 44-year-old man with fibroma in the tip of the tongue [13]. Finally, there was a case of irritation fibroma of the right lateral border of the tongue in a 46-year-old female reported by Vujhini SK et al. [14] One reported by Meng Jiang et al., for a 53-year-old man with two years of lesions on the tip of his tongue[15].

The previous reported cases show the lesion located on the border side of the tongue. Unlike our case, the patient was a man, but the lesion was present in the central area of the dorsal part of the tongue.

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.[16].

Usually, irritation fibroma is treated by surgical excision and does not recur, provided the source of irritation and trauma is eliminated. Conservative excision biopsy is curative, and its findings are diagnostic; however, recurrence is possible if exposure to the offending irritant persists [17].

The presented case shows the histopathology features of the hematoxylin and eosin-stained section, which exhibits an ortho-keratinized stratified squamous epithelium. The connective tissue side shows numerous small and sizeable blood vessels, slight chronic inflammatory infiltrate chiefly comprising plasma cells and lymphocytes, and dense collagen fiber bundles arranged haphazardly. These findings were similar to previous studies done, and the diagnosis was finally confirmed as “Traumatic fibroma” [18,19]

Conclusion:

This case demonstrates an oral fibroma in an unusual location on the dorsum of the tongue following the consumption of a hot liquid. Oral fibroma is a benign neoplasm, and trauma is the most common cause. Increased awareness of this lesion is essential, as it is one of the most common benign soft-tissue neoplasms in the oral cavity.

References :

1. Phore S, Panchal RS “Traumatic oral lesions: Pictorial essay”. Med J DY PatilVidyapeeth. 2018; 11(2): 94-98.
2. de Santana Santos T, Martins-Filho PR, Piva MR, de Souza Andrade ES. Focal fibrous hyperplasia: A review of 193 cases. J Oral Maxillofac Pathol. 2014 Sep;18(Suppl 1):S86-9.
3. Esmeli T, Lozada-Nur F, Epstein J. Common benign oral soft tissue masses. Dent Clin North Am. 2005 Jan;49(1):223-40.
4. Borkar P, Gattani D, Uike S “Traumatic Fibroma – A Case Report”. J Clin Case Rep. 2019; 2(2): 1021.
5. Vujhini SK, Sridhar Reddy E, Sudheer MVS, Katikaneni HK. Irritation fibroma of the tongue: A case report”. Int J Res Med Sci. 2016; 4(4): 1272-1273

6. Barker DS, Lucas RB. "Localised fibrous overgrowths of the oral mucosa". *Br J Oral Surg.* 1976; 5(2): 86-92.
7. Bouquot JE, Gundlach KK. "Oral exophytic lesions in 23,616 white Americans over 35 years of age". *Oral Surg Oral Med Oral Pathol.* 1986; 62(3): 284-291.
8. Torres-Domingo S, Bagan JV, Jiménez Y, Poveda R, Murillo J, et al. "Benign tumors of the oral mucosa: A study of 300 patients". *Med Oral Patol Oral Cir Bucal.* 2008; 13(3): E161-6.
9. Lulla RV, Jaiswal P "Traumatic Fibroma: A Case Report". *European Journal of Molecular & Clinical Medicine.* 2020; 7(7): 1653-1660
10. Dhanuthai K, Rojanawatsirivej S, Somkotra T, et al. Geriatric oral lesions: a multicentric study. *Geriatr Gerontol Int* 2016; 16: 237-43.
11. Alaeddini M, Barghammadi R, Eshghyar N, et al. An analysis of biopsy-proven tongue lesions among 8,105 dental outpatients. *J Contemp Dent Pract* 2014; 15: 1-7.
12. 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.
13. Rathva VJ Traumatic fibroma of tongue *CaseReports* 2013;2013bcr201200822
14. Vujhini SK, Reddy SE, Sudheer MVS, Katikaneni HK. Irritation fibroma of tongue: a case report. *Int J Res Med Sci* 2016; 4:1272-3.
15. Jiang M, Bu W, Chen X, Gu H. A case of irritation fibroma. *Postepy Dermatol Alergol.* 2019 ; 36(1):125-126.
16. Gonsalves WC, Chi AC, Neville BW. Common oral lesions: Part II. Masses and Neoplasia. *American Family Physician.* 2007; 75: 509-512
17. Madhusudan AS, Gupta S, Sowmya GV. Focal Fibrous Hyperplasia: Report of two Cases. *Int J Dent Clinics.* 2011; 3: 111-112
18. Borkar P, Gattani D, Uike S. Traumatic Fibroma – A Case Report. *J Clin Case Rep.* 2019; 2(2): 1021
19. Navnita Singh, Shivaprasad Bilichodmath, Savita Sambhashivaiah. Traumatic Fibroma: A Case Series.. *Journal of Health*