CASE REPORT

Irritationental fibroma of gingiva in a young female: A case report

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Abstract

Irritationental fibroma is a reactive lesion that is among the most common oral soft-tissue lesions, caused due to local trauma or irritation by plaque, calculus, overhanging margins, and restorations. It is most commonly seen on buccal mucosa along the line of occlusion in third to fourth decade of life. The second most common site is the maxillary anterior gingiva. The color is usually same as the surrounding mucosa and consistency is soft to firm. This paper aims to present a rare case of irritationental fibroma of gingiva in a 15-year-old adolescent female patient.

Keywords
Gingiva, irritationental fibroma, trauma, young female

Introduction

Irritationental fibroma is a common, benign, slow-growing, soft-tissue tumor. It can be often seen associated with trauma and constant irritation. It usually presents as an asymptomatic mass which gradually increases in size. There are no significant complications due to irritationental fibroma. It is usually managed by complete surgical excision. The prognosis is excellent once the source of irritation is completely eliminated. Hereby, we present a rare case report of a 15-year-old female patient having irritationental fibroma in the maxillary anterior tooth region.

Case Report

A 15-year-old female patient has reported to the Department of Oral Medicine and Radiology, Bapuji Dental College, Davangere, with the chief complaint of pain in upper front teeth region for 1 year followed by trauma to the upper front tooth region 1 year back due to road traffic accident. History of presenting illness revealed that pain is gradual on onset, mild in intensity, localized, and associated with swelling on the gum region of the involved tooth for 9 months. Swelling is gradual on onset, slowly progressing, initially smaller in size, and with time it has increased to the present size. Her past dental, medical, and drug history were not significant. On extraoral examination, the presence of scar mark on left ala of the nose [Figure 1]. Submandibular lymph nodes were palpable, oval, 1.5 cm x 1.5 cm, soft, mobile, and tender bilaterally. On intraoral soft-tissue examination, a solitary gingival overgrowth is evident with respect to 11 to extending from the mesial aspect of 21 to 4 mm beyond the distal aspect of 12 mediolaterally and from cervical third to incisal third of 11 superoinferiorly, pink in color, roughly oval, 1 cm x 1.2 cm, with overlying smooth surface, and embedded tooth pieces in it, surrounding mucosa is normal and borders are well defined. On palpation, all inspector findings are confirmed. The growth is non-tender, firm in consistency, mobile, and having sessile base. Labial vestibule and palate were apparently normal with respect to 11 [Figure 2a and b]. Hard-tissue examination revealed normal compliment of teeth were present. Crown en masse fracture was evident with respect to 11 and Ellis Class I fracture was evident with respect to 12, 21, and 42. 11 was tender on vertical percussion. Based on the history and clinical examination, a provisional diagnosis of localized gingival epulis secondary to trauma with respect to 11 was given. Differential diagnosis given was irritationental fibroma and long-standing pyogenic granuloma (PG). Irritationental fibroma is the most common soft-tissue tumor of oral mucosa associated with trauma, having normal mucosal color, and soft to firm in consistency, affecting maxillary gingiva.
PG is the other soft-tissue lesion affecting the maxillary gingiva commonly; long-standing PG is pinkish in color and firm in consistency. Orthopantomogram (OPG) and intraoral periapical (IOPA) with respect to 11 were taken. OPG revealed normal compliment of teeth were present in maxillary and mandibular arch along with developing tooth with respect to 18, 28, 38, and 48. Coronal radiolucency involving enamel, dentin with respect to 36, and radiolucency approaching pulp with respect to 21 and involving pulp with respect to 11 tooth. Both horizontal and vertical fracture lines are evident with respect to 11 crown [Figure 3a]. IOPA with respect to 11 revealed continuous lamina dura with respect to 11 and widening of periodontal ligament space at the apical third of 11, 21 roots. Coronal radiolucency involving enamel, dentin, and pulp with respect to 11, 12. Both horizontal and vertical fracture lines are evident with respect to 11 crown. Root resorption at the apical third is evident with respect to 11 [Figure 3b]. No evidence of soft-tissue calcification is evident. The patient was then referred for the excision of gingival growth and the excised specimen was then sent for the histopathological examination. The histopathological report revealed the presence of hyperparakeratinized stratified squamous epithelium and connective tissue. The epithelium was hyperplastic with elongated rete ridges and the connective tissue was composed of numerous budding blood capillaries, engorged rete ridges. The presence of chronic inflammatory cell infiltrate composed of lymphocytes and plasma cells were evident, which were suggestive of irritational fibroma [Figure 4].

**Discussion**

As the oral mucosa is constantly under the influence of various internal and external stimuli, it exhibits a variety of developmental disorders, irritation, inflammation, and neoplastic conditions. One of these conditions is the local reactive focal overgrowths. Reactive lesions are tumor-like hyperplasias and show a response to a low-grade irritation or injury, such as chewing, food impaction, calculus, iatrogenic

![Figure 1: Front facial profile](image1)

![Figure 2: (a) Clinical picture of the growth, (b) palatal view of 11](image2)

![Figure 3: (a) Intraoral periapical with respect to 11, 21, (b) orthopantomogram](image3)

![Figure 4: Histopathological picture of irritational fibroma](image4)
Injuries like broken teeth, overhanging dental restorations, and extended flanges of the denture[3–4] Traumatic or irritational fibroma is a common, benign, exophytic, and reactive oral lesion that develops secondary to injury and constitutes about 7.4% of oral soft-tissue lesions.[3,6] Irritational fibroma is also known as focal fibrous hyperplasia, oral fibroma, or fibromatosis fibromatosis. It shows female predilection than males and seen more frequently in the third and fourth decade of life.[2] Approximately, 60% of irritation fibromas involve the maxilla and more often found in the anterior region, with 55-60% present at the incisor-cuspid region.[5]

Clinical features comprise sessile or pedunculated masses with smooth or injured surfaces, and are seen in different colors ranging from pale to bright pink to red.[6,7] The size of these reactive hyperplastic masses can be greater or lesser, depending on the components of the inflammatory reaction and healing response exaggerated in the particular lesion.[10,11] Diameter of these lesions measures <1.5 cm usually and more than 3 cm in rare cases. In a very few cases, lesions having a size between 6 and 9 cm have also been reported. Most of them are asymptomatic, only few are associated with bleeding. The surface of the lesion may be ulcerated in 66% of cases and intact in 34% of cases.[12] Irritational fibroma can also produce migration of teeth with destruction of the interdental bone.[9] Differential diagnosis includes PG, peripheral giant-cell granuloma, and peripheral ossifying fibroma (POF), which may also arise as a result of irritation due to plaque microorganisms and other local irritants.[13]

Histopathologically, the sections show hyperplastic stratified squamous epithelium which is partly hyperkeratotic and hyperorthokeratotic at some places. Thin, finger-like rete ridges extend into underlying fibrocellular connective tissue stroma. Solid nodular mass of dense hyalinized fibrous connective tissue arranged in haphazard fascicles with moderate chronic inflammatory cell infiltrate can also be seen at a few sites.[14,15]

Treatment of irritation fibroma aims at elimination of etiological factors followed by scaling of adjacent teeth and total aggressive surgical excision along with involved periodontal ligament and peristeum to minimize recurrence. Any identifiable irritant should be removed. Long-term post-operative follow-up is very important because of the high growth potential of an incompletely removed lesion.[2,16] Recurrences are rare and may be caused by repetitive trauma at the same site. The lesion does not have a risk for malignancy.[15]

Conclusion
Irritational fibroma is one of the most common oral soft-tissue lesion which can be confused with other similar entities such as PG, peripheral giant-cell granuloma. Therefore, thorough history, clinical, radiological, and histological examination should be carried out to rule out differentials. In addition to this, an early detection and treatment of this reactive lesion by the dentist can reduce the chances of dentoalveolar complications. Furthermore, awareness of the incidence and description of these kinds of lesions can help the clinicians to make a better diagnosis and offer optimal treatment.

References