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Case Report

Rapidly Growing Palatal Irritated Fibroma Mimicking Oral Malignancy: A Case Report

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Abstract

Background: Irritated fibroma is one of the most common benign reactive lesions of the oral cavity, typically affecting the buccal mucosa, tongue, or lips. Palatal involvement, however, is uncommon. When presenting with rapid growth, ulceration, and a reddish pedunculated appearance, such lesions may clinically mimic malignancy, raising significant diagnostic concern.

Case Presentation: We report the case of a 24-year-old female who presented with a painless, reddish, pedunculated mass arising from the central palate, evolving over two weeks. The lesion showed a rapid increase in size during three weeks of evolution. Clinical examination revealed a nodular mass measuring approximately 3 × 2.5 × 1.3 cm, with a firm consistency and an ulcerated surface. Due to its alarming growth rate and clinical features, a malignant tumor was strongly suspected. Complete surgical excision was performed.

Histopathological analysis revealed ulcerated squamous mucosa overlying a proliferation of spindle-shaped fibroblastic cells arranged in interlacing bundles within a collagen-rich stroma. No evidence of atypia, necrosis, or malignancy was identified. The final diagnosis was ulcerated irritated fibroma. The postoperative course was uneventful, and no recurrence was noted during the 8-month follow-up.

Conclusion: This case emphasizes an unusual palatal localization of irritated fibroma with features mimicking malignancy. It highlights the critical role of histopathological evaluation in distinguishing benign reactive lesions from oral malignancies, and underlines that rapid clinical growth is not invariably a sign of malignancy.

Keywords: Irritated Fibroma; Palate; Oral Cavity; Benign Lesion; Differential Diagnosis; Case report

Introduction

Irritated fibroma, also referred to as traumatic fibroma, is the most common benign soft-tissue lesion of the oral cavity. It represents a proliferation of fibrous connective tissue and is generally regarded as a reactive hyperplasia rather than a true neoplasm, which makes the distinction between neoplastic and reactive processes particularly challenging [1]. Epidemiological studies indicate that they are observed in about 1.2% of adults, with a clear female predominance of nearly 66% [2]. Clinically, these lesions usually present as slow- growing nodules that reach their maximum size—typically around 1 cm in diameter—over weeks to months, although larger lesions have also been reported [3]. They are generally asymptomatic, sessile or pedunculated, firm in consistency, and covered by a smooth, pink to flesh-colored mucosa.

The etiopathogenesis is strongly associated with chronic mechanical trauma or persistent local irritation, including lip or cheek biting, occlusal trauma, malpositioned teeth, sharp or fractured restorations, ill-fitting dentures, orthodontic appliances, or dental calculus. While irritated fibromas can develop at virtually any intraoral site, they occur most frequently on the gingiva, buccal mucosa, labial mucosa, and tongue [4]. Involvement of the hard palate, however, is considered rare due to the lower likelihood of repeated trauma in this region. Management relies on complete surgical excision, which can be performed with a scalpel, electrocautery, or laser. Prognosis is excellent, and recurrence is uncommon, usually attributable to incomplete removal or persistence of the etiologic factor [5]. In this report, we describe a rare case of an unusually large irritated fibroma arising from the hard palate with clinical features mimicking malignancy. This case underlines the importance of including fibroma in the differential diagnosis of palatal lesions and highlights the critical role of histopathological evaluation in establishing the correct diagnosis.

Case Presentation

A 24-year-old female patient presented with a painless swelling on the midline of the hard palate that had appeared two weeks earlier. Initially, the lesion was small, with a pink, non- ulcerated surface (Figure 1). Over the following three weeks, it showed a rapid increase in size, accompanied by surface ulceration and bleeding upon contact. The patient reported no significant medical history or systemic disease and denied any history of tobacco or alcohol use.

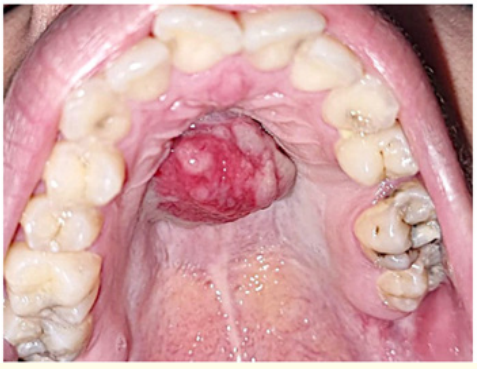

Figure 1: Initial intraoral view showing a small, pink, non-ulcerated swelling on the hard palate.

Clinical examination revealed a reddish, pedunculated, ulcerated mass located at the central hard palate, measuring approximately 3 × 2.5 × 1.3 cm (Figure 2). The lesion was firm in consistency, slightly tender on palpation, and exhibited a smooth but ulcerated surface. No cervical lymphadenopathy was detected. Due to its alarming clinical features—rapid growth, ulceration, and bleeding—a provisional diagnosis of malignancy was considered.

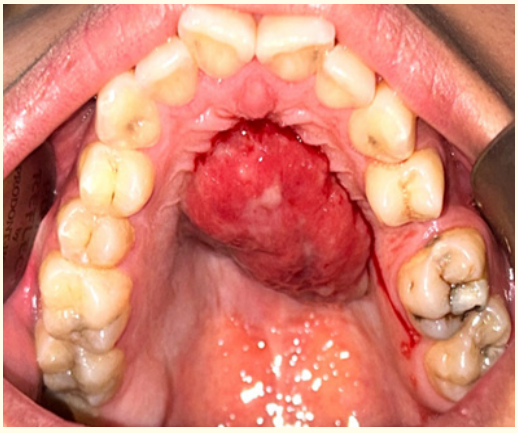

Figure 2: Intraoral view after three weeks showing a reddish, ulcerated, pedunculated mass at the midline of the hard palate.

Radiographic examination showed no underlying bone involvement or other abnormalities (Figure 3).

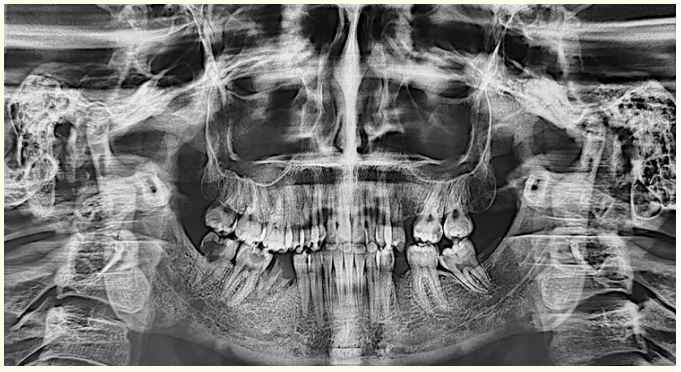

Figure 3: Panoramic radiograph showing no underlying bone lesion.

The patient underwent complete surgical excision of the lesion under local anesthesia using a scalpel (Figure 4). The excised specimen appeared fibrous on section, with the implantation base marked in black ink, and was submitted for histopathological examination.

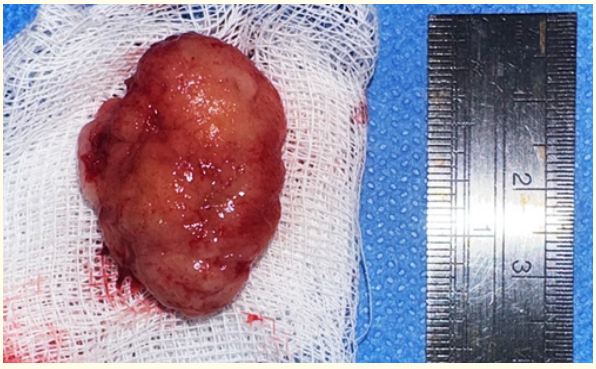

Figure 4: Excised specimen measuring approximately 3 × 2.5 × 1.3 cm.

Histopathological findings revealed ulcerated stratified squamous epithelium overlying a fibrocollagenous stroma. The connective tissue consisted of spindle-shaped fibroblastic cells with eosinophilic cytoplasm, oval nuclei with fine chromatin, and occasional small nucleoli. The cells were arranged in interlacing bundles and embedded within a homogeneous collagen matrix. Numerous mitotic figures were observed, estimated at more than six mitoses per ten high-power fields; however, they appeared normal. Importantly, there was no evidence of nuclear atypia, necrosis, or malignant transformation. The final diagnosis was ulcerated irritated fibroma**,** with absence of malignancy (Figure 5).

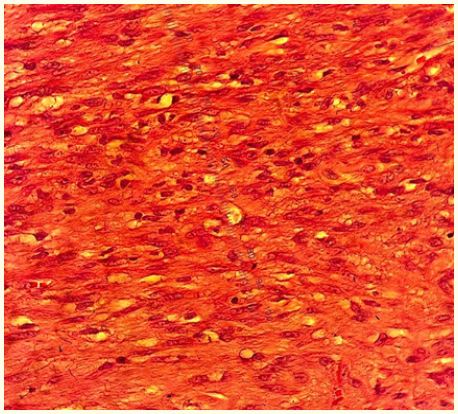

Figure 5: Histopathological section (H&E ×40) demonstrating spindle-shaped fibroblasts within a collagen-rich stroma, without atypia or necrosis.

Postoperative course was uneventful. The surgical wound healed completely, and the 8- month follow-up examination demonstrated normal palatal mucosa with no evidence of recurrence (Figure 6).

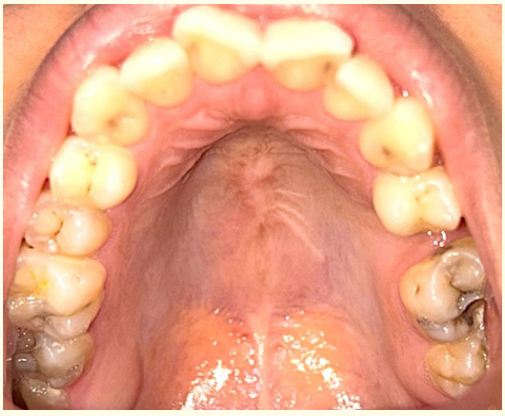

Figure 6: Postoperative follow-up at 8 months showing complete healing with no recurrence.

Discussion

Irritated fibroma is one of the most common benign soft-tissue lesions of the oral cavity, accounting for approximately 4.5% of all oral mucosal lesions [6]. It most frequently affects trauma-prone areas such as the buccal mucosa, whereas the hard palate represents an unusual site due to its relative protection from chronic irritation [2,3]. The present case is of particular interest because of its atypical clinical behavior, characterized by rapid enlargement over a short period, ulceration, and bleeding on contact. Such alarming features strongly suggested malignancy and illustrate the potential for diagnostic confusion. Comparable findings have been documented in several reports of atypical palatal fibromas, underscoring the indispensable role of histopathological confirmation [4,7,8].

Epidemiological studies indicate that irritation fibroma occurs more commonly in females, with a peak incidence between the second and fourth decades of life, suggesting a possible hormonal influence [6]. Typically, these lesions measure less than 1.5 cm in diameter and rarely exceed 3 cm [9]. Only a few cases of unusually large fibromas—measuring up to 5 × 4 × 3 cm—have been reported at different intraoral locations, including the palate and gingiva [10]. The differential diagnosis of palatal swellings is extensive. Conditions such as pyogenic granuloma, peripheral ossify-

ing fibroma, peripheral giant cell granuloma, and both benign and malignant salivary gland tumors may present with similar clinical features [1].

Ulceration, rapid growth, and spontaneous bleeding, as observed in this case, are particularly worrisome signs that often reinforce the suspicion of malignancy. Nevertheless, histopathological examination remains the gold standard for diagnosis, enabling the distinction between reactive hyperplastic lesions and true neoplasms. In this case, the absence of cytological atypia, necrosis, or malignant transformation, despite a relatively high mitotic count, was essential in establishing the final diagnosis of ulcerated irritated fibroma.

Therapeutic management of irritation fibroma relies on complete surgical excision, which can be achieved with a scalpel, electrocautery, or diode laser. Conventional scalpel excision is reliable and widely practiced, though it may be associated with intraoperative bleeding, the need for sutures, and increased postoperative discomfort [9]. Diode lasers (810–980 nm) have emerged as a valuable alternative, offering precise soft-tissue ablation, simultaneous coagulation, bactericidal effects, and enhanced postoperative healing [8,10]. La Terra., *et al*. (2025) reported four cases of oral traumatic fibroma excised with a 980 nm diode laser, showing significant advantages including reduced intraoperative bleeding, minimal postoperative discomfort, faster healing within 7–9 days, improved esthetic outcomes, and absence of recurrence at six months [11].

Despite these advantages, the conventional scalpel remains an effective and accessible method that ensures complete excision with excellent prognosis, especially in settings where advanced laser technology may not be available. In the present case, scalpel excision achieved total removal of the lesion, uneventful postoperative healing, and absence of recurrence at the 8-month follow-up.

Overall, irritated fibroma of the hard palate represents a rare clinical entity. The present case adds to the limited body of literature describing large palatal fibromas with atypical, malignancy-mimicking features. It highlights the necessity of histopathological evaluation for definitive diagnosis and emphasizes that, while diode laser surgery offers modern advantages, conventional scalpel excision remains a dependable treatment option ensuring excellent outcomes.

Conclusion

Irritated fibroma is a common benign lesion of the oral cavity; however, its occurrence on the hard palate is rare. When associated with rapid growth, ulceration, and bleeding, as in the present case, it can closely mimic malignancy and raise considerable diagnostic concern. This report highlights the critical role of histopathological evaluation in distinguishing benign reactive lesions from oral tumors with malignant potential. Complete surgical excision remains the treatment of choice, with an excellent prognosis and low recurrence rate once the etiological factors are eliminated. Practitioners should therefore consider irritated fibroma in the differential diagnosis of palatal masses to avoid misdiagnosis and ensure timely management.

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