Verruciform Xanthoma in the Marginal Gingiva: A Clinical Case Report

Prachi Khuntia[1], Rashmita Nayak[2], Neeta Mohanty[3], Anurag Satpathy[2], Abhaya Chandra Das[4], Saurav Panda[4], Sharmistha Das[1]

[1]Post Graduate Trainee, [2]Professor, Department of Periodontics and Oral Implantology, [3]Professor & Head, Department of Oral Pathology and Microbiology, [4]Reader, Department of Periodontics and Oral Implantology, Institute of Dental Sciences, Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, Odisha, India

Abstract

Verruciform xanthoma can be described as a rare, benign lesion. It can be classified as a papillary, asymptomatic or sessile. it can be well-demarcated from the adjacent tissue and can be seen frequently in the alveolar mucosa and gingiva. The salient histopathological feature is the abundance of foam cells (xanthoma cells) along with macrophages present in the soft papillary tissue.[1] The exact etiopathogenesis is still unknown, but the causative agents can be local factors like viral infections or trauma that have been suggested by hypothesis. Therefore this case report aims to present a case of verruciform xanthoma located in the marginal gingiva (lingual aspect) and describe the clinical features and histopathological aspects.

Keywords: *Verruciform Xanthoma, Verrucous Lesions, Xanthoma Cells.*

Introduction

Verruciform Xanthoma (VX) can be described as a benign lesion that appears rarely in the oral mucosa. Shafer in 1971 described it for the first time. Typically VX has a papillary or verruciform appearance and presents features of hyperkeratosis, and lacks in having proper etiopathogenesis. It has equal sex predilection. The widely affected patients are about the age-range of fifty years. It involves bothupper and lower jaws equally and the gingiva near the premolar area is one of the main sites having a maximum occurrence of VX.[1] Predominantly, it can present itself as an asymptomatic, slow-growing lesion. The base is either sessile or pedunculated, colour varies from pink to white.[2] The size of the lesion varies in different cases.VX most frequently occurs in the palatal or gingival masticatory mucosa, nevertheless, other areas where it can appear are the lateral border of the tongue, buccal mucosa, and floor of the mouth.For its particular characteristics, several cases of VX can be diagnosed as papillomas, condylomas, ordinary (vulgar) warts, and leukoplakia and occasionally as verrucous or epidermoid carcinomas.[2,3]

Case Presentation: A 35-year-old female patient came with the chief complaint of a growth on the lingual aspect of lower front teeth region for 3 months followed by loosening of teeth in the same region for 2 years (Figure 1). The patient doesn't give any history of pain. On clinical examination a single swelling is present in the lingual aspect of 41, 42 of 0.8 cm in diameter,well-circumscribed with areas of erythema. On palpation it was firm in consistency,non-tender, pedunculated and was bleeding on probing (Figure 2). The Lymph nodes examination showed non-palpable lymph nodes. The patient didn't have any systemic disease andcan be considered as healthy. After considering the clinical features,a provisional diagnosis of pyogenic granuloma was concluded. An excisional biopsy was performed after the clinical evaluation to dismiss the probability of malignancy.

Corresponding Author:
Rashmita Nayak
Professor, Department of Periodontics and Oral Implantology, Institute of Dental Sciences, Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, Odisha, India
e-mail: rashmitanayak@soa.ac.in

Histopathological examination was done. The hematoxylin andeosin (H & E) stained sections showed parakeratinization in the epithelium along with columns of parakeratin plugging present inside it. Uniform rete pegs with deep connective tissue papilla were seen. The papilla was extendedtill the overlying surface epithelium. There was the presence of few neutrophil cells in the upper spinous layer. The main histologic feature of VX, which is the lipid-laden foam cells were seen in the papillary zone of lamina propria. The presence of the foam cells in the papillary region of connective tissue itself confirmed the diagnosis as VX (Figure 3).Any signs of dysplasia or malignancy were not found in the histopathological analysis.

Figure 1. Clinical picture of the lesion present in the marginal gingiva (lingual aspect) i.r.t 41,42

Figure 2. Clinical picture of the lesion with probing depth located in the lingual aspect of 41, 42.

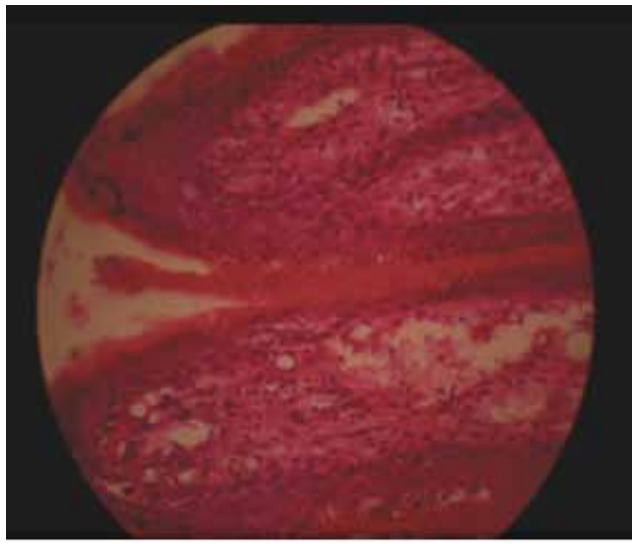

Figure 3. Presence of numerous lipid-laden foamy cells confined to the connective tissue papillae (H & E stain).

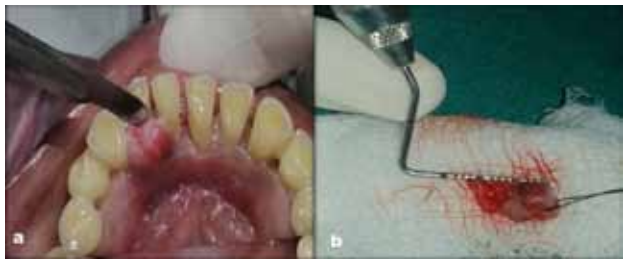

Figure 4a. Excision of the lesion using a scalpel; Figure 4b. Showing lesion after the excision.

Figure 5. Flap approximated and suture placed

Figure 6. Coe pack placed after the excision of the lesion

Surgical Intervention: The procedure was executed under 2% lignocaine. The lesion was excised asa whole during excisional biopsy (Figure 4). After the excision (Figure 5, Figure 6), the coe pack was placed (Figure 7) to avoid coming in contact with the external environment, and post-operative surgical instructions were given to the patient.

Discussion

Verruciform xanthoma is a benign lesionthat occurs rarely. Exclusively,two hundred and eighty-two cases had been reported up to 2001 and from the period of 2003 to 2007, only 3 cases of verruciform xanthoma were reported. Henceforth, it can be said that it's a rare lesion[3]. Reports have suggested that verruciform xanthoma is mostly seen in masticatory mucosa and mostly on the gingiva, followed by hard palate, tongue, buccal mucosa/ vestibule, floor of the mouth, alveolar mucosa, and soft palate.[4] Seen mostly in those patients having an age range of 40-70 years.[5] The clinical presentation shows isolated pink to white yellow papules or nodules, that are persistent, slow-growing and asymptomatic. The surface texture varies from papillary, granular, or verrucous.[5] They can have either a pedunculated or a sessile base.

VX is a quite uncommon lesion with an undiagnosed etiopathology. The probable reason can be due to the irritation in the squamous cells caused by infection, trauma which can ultimately lead to increased epithelial turnover rate. The epithelial breakdown results in a cascade of inflammatory response which further leads to the leakage of lipid materials from the degenerated cells.[6]

It appears similar to the HPV when seen histopathologically but any association between HPV and VX is not yet established. The main relevant clinical diagnosis can be papilloma or ordinary wart. Verrucous like solitary lesions in the oral cavity can be the differential diagnosis of VX. Due to its non-specific clinical features, there are several other differential diagnosis like squamous papilloma, condyloma accuminatum, focalepithelialhyperplasia, leukoplakia,verruca vulgaris or even epidermoid carcinoma in the initial stages.[6] Some previous case reports have shown the association between VX along with some other previous or concomitant lesions like lichen planus, carcinoma in situ or epidermoid carcinoma. These lesions are classified histologically based on several characteristics like surface texture, rete ridges proliferation etc. the rete pegs can be elongated, uniform and thin. They have keratinized clefts present in the central portion along with keratin plugging.[6] Nonetheless, the evidence of any metastatic features or dysplastic characteristics is not yet found.[7]

The main characteristics of VX are the abundant of the xanthoma cells in the connective tissue and the lipid-laden cells in the superficial layer of connective tissue. The accurate origin of these cells is controversial. It can be of the microphage or monocyte lineage. The treatment choice can be surgical excision of VX which is effective with almost no recurrence. In every case, after surgical excision histopathological examination of the biopsy samples should be done to rule out any possibilities of VX from any other verrucous lesions. [8-10]

Conclusion

VX can be described as a rare lesion encountered on the gingival mucosa. Its clinical features are not pathognomonic, so it should be considered as a differential diagnosis of Verrucous or papillary lesions. Furthermore, it needs proper treatment planning and management in time.

Conflicts of Interest: None

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Ethical Permission: Approved

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