Desquamative gingivitis mimicking mild gingivitis

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Abstract:
The aim of this report is to diagnose the cause for episodic, shifting type of mild inflammation in the isolated areas of gingiva noted by the patient for 1 year. A 33-year-old female patient presented with a chief complaint of mild pain and occasional burning sensation confined to the gingiva to the Department of Periodontology and Oral Implantology. Clinical presentation of the gingiva was seen to mimic mild form of gingivitis for 1 year, with no noted systemic involvement gingival biopsy was performed. The presence of Tzanck cell was noted along with intraepithelial split pointing toward pemphigus. Thus, the study concludes that thorough and meticulous gingival examination can reveal the picture of underlying systemic alterations and is the key for early diagnosis and prompt treatment.

Key words:
Desquamative gingivitis, gingivitis, intraepithelial split, pemphigus, Tzanck cell

INTRODUCTION

Desquamative gingivitis (DG) is a descriptive term for nonspecific gingival manifestation associated with different diseases. Different types of mucocutaneous disorders represent gingival manifestations as either desquamative lesions or in the form of gingival ulceration. The most important diseases are: Lichen planus, pemphigoid, pemphigus, erythema multiforme as well as allergic stomatitis and psoriasis vulgaris.[1]

The standard in making a clinical diagnosis of DG: Erythema of gingiva not caused by dental plaque, desquamation of gingiva, other intraoral and sometimes extraoral lesions, and mouth soreness due to spicy food items.[2]

Pemphigus, named by Wichman in 1791, is a group of chronic bulbous diseases. The term pemphigus once included most bulbous skin eruptions, but with the advent of sophisticated diagnostic tests, bulbous diseases have been reclassified. Pemphigus characterized by blisters found intradermally when seen histologically and immunologically by finding the presence of IgG antibody in circulation and directed against the cell surface of keratinocytes is clinically includes a group of autoimmune diseases resulting in blister formation of the skin and mucous membranes.[3]

Pemphigus vulgaris first affects the mucous membranes a couple of months before the appearance of cutaneous lesions.[3] Clinically, pemphigus vulgaris shows the presence of typical bullae and ulcers on the skin. However, manifestations of oral mucosa are less characteristic, typically seen as multiple, erosions of the mucosa being chronic in nature or superficial ulcers of varying sizes and most of the times the bullae being ruptured. Hence, oral pemphigus vulgaris could result in longer diagnostic and treatment delays than cutaneous pemphigus, due to unfamiliar features, thus the treatment response and prognosis being adversely affected.[4]

This article describes the case of a patient with gingival presentation mimicking mild gingivitis which eventually was diagnosed as pemphigus vulgaris.

CASE REPORT

A 33-year-old female patient presented with a chief complaint of mild pain and occasional
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burning sensation confined to the gingiva to the Department of Periodontology and Oral Implantology. However, further investigation regarding the nature of the gingival presentation, patient stated that she has been experiencing episodic, shifting kind of gingival lesions for 1 year. From a general dentist, the patient had initially received supragingival scaling and tooth brushing instructions and was advised the use of ulcer relieving gel (Dologel); the patient, however, noted no improvement in the gingival presentation in spite of repeated phase I therapy.

Oral examination revealed mild to moderate inflammation of marginal gingiva and interdental papilla of teeth number 45 and 46. The presence of Nikolsky’s sign was noted (i.e., the gingival surface when slightly scratched, the epithelium could be peeled away easily Figures 1-3). She had no lesions on the skin or the extraoral sites and her medical history showed no relevant findings. Pemphigus vulgaris, gingivitis, and erosive lichen planus were considered as the differential diagnosis.

On her second appointment, gingival biopsy was obtained from the advancing edge of the lesion of tooth number 45, Figures 4-8 where areas of characteristic intraepithelial split may be observed by the pathologist [Figure 9]. On her third appointment (i.e. after 1 week), the gingival biopsy site showed...
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Figure 7: Excised gingival tissue

Figure 8: Periodontal dressing given

Figure 9: Histologic section

Figure 10: One-week postoperative healing of gingiva in relation to tooth number 45

Figure 11: Two months follow-up (front view)

Figure 12: Two months follow-up (lateral view right side)

Figure 13: Two months follow-up (lateral view left side)

Figure 14: Area showing desquamative gingival lesion in relation to tooth number 15
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a progressive eventful healing but her gingiva presented with an additional lesion of mild nature on tooth number 35 [Figure 10]. After her biopsy results were obtained, the patient was advised to use a synthetic corticosteroid, Kenacort in the form of oral ointment.

On her fourth appointment (i.e., after 2 months), her gingiva presented with reduced gingival inflammation at initial involved sites [Figures 11-13]. However, at 4-month recall visit, a lesion of mild nature involving only the gingival margin in relation to tooth number 15 was noted [Figure 14].

RESULTS

On histopathological examination, parakeratinized stratified squamous epithelium with intraepithelial split and Tzanck cells were noted and connective tissue was fibrous with diffuse chronic inflammatory infiltrate. The clinical and histopathological findings helped us diagnose the case as pemphigus vulgaris.

In this patient, 1 year had elapsed from the onset of the oral lesions to the definitive diagnosis of pemphigus vulgaris which, however, took only 2 weeks from her first visit to Periodontology and Oral Implantology Department of the Oxford Dental College and Hospital.

DISCUSSION

Of all the cases of DG, mucous membrane pemphigoid (48.9%) and erosive lichen planus (23.6%) are the most frequent ones. Pemphigus vulgaris is only 2.3% of DG (2.3%). The definitive diagnosis of DG is based on histopathological examination and direct immunofluorescence testing.[2,6-9]

For the definitive diagnosis of PV, the presence of the following features is a must which are: Presence of appropriate clinical lesion or lesions, biopsy specimens showing acantholysis, and presence of autoantibodies in either tissue or serum or both.[10]

Diagnosis as pemphigus vulgaris of this case was made keeping in mind the following findings:[1] Intraepithelial split and Tzanck cell in histological examination of gingival biopsy specimens,[2] tombstone appearance,[3] burning sensation in gingiva on eating spicy food,[4] Nikolsky’s sign,[5] positive response to the use of topical corticosteroid (Kenacort).

Direct immunofluorescence could not be performed in this case as the gingival lesion was too small.

CONCLUSION

The highlighting feature of this case was that mild presentation of the gingival lesions resulted in misdiagnosis of the case as gingivitis for 1 year by quite a few dentists. Thus, this case report tries to draw attention toward the two most important aspects of diagnosis—meticulous oral examination and thorough recording of patient’s chief complaint.

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