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Chronic desquamative gingivitis and oral health-related quality of life

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Abstract

Background: Chronic desquamative gingivitis is a clinical description of the gingiva which is often a presenting manifestation of dermatoses or mucocutaneous disorders. The patients often experience oral discomfort and pain, which can significantly compromise their life qualities.

Main observations: Here we present a case of chronic desquamative gingivitis in a 77-year-old woman with periodontitis. After establishment of oral hygiene, initial periodontal therapy including topical steroid application was performed. Subsequent periodontal surgery resulted in further reduction of local inflammation. These interventions lead to a significant improvement in gingival lesions as well as oral health-related quality of life.

Conclusions: Chronic desquamative gingivitis is often a presenting manifestation of dermatoses or mucocutaneous disorders. Correct and early diagnosis is important. Management of inflammatory conditions including periodontitis can contribute to the clinical resolution of chronic desquamative gingivitis and improve life quality of the patient. A greater awareness of this condition among dentists and dermatologists would be helpful in providing patient-centered care.

Introduction

The term chronic desquamative gingivitis (CDG) is a clinical description of the gingiva which may manifest as a result of various underlying conditions. It is characterized by intense erythema, desquamation, and ulceration of the free and the attached gingiva.[1] Its clinical appearance is not significantly altered by traditional oral hygiene measures or conventional periodontal therapy alone.[2,3]

The majority of cases of CDG are now known to be due to mucocutaneous conditions, in particular lichen planus, pemphigoid and pemphigus.[4-7] Other causes include allergic reactions to toothpastes/mouth rinses (plasma cell gingivitis)[8-10], Crohn's disease[11], psoriasis[12], linear IgA disease[13], and chronic ulcerative stomatitis.[14]

Case report

A 77-year-old woman was referred from an oral surgery clinic of a general hospital to our dental clinic, with a chief complaint of oral discomfort, soreness of the gingiva.

The patient had hypertension and had been taking nifedipine for several years. Oral examination revealed localized areas of gingival desquamation (Fig. 1A). She also had moderate levels of periodontal pocket and intrabony periodontal defects, and periapical lesions of teeth. Oral health-related quality of life was measured using an instrument based on the dental hygiene model (OHRQL).[15,16]

At the initiation of periodontal therapy, a referral was made to a dermatologist. Since the patient was found to have no lesions in cutaneous, nasal, ocular or genital area, the dermatologist ruled out pemphigus vulgaris or bullous pemphigoid as an underlying pathology. A histological examination revealed acantholysis, suprabasal bulla formation, free-floating acantholytic cells within the vesicle fluid, and intact basal cell layer still attached to basal lamina and mild inflammatory infiltrate. Then clinical diagnosis of generalized chronic periodontitis with CDG was made.

As a part of oral hygiene instruction, plaque control with a sonic toothbrush (Sonicare Elite, Phillips Electronics, Tokyo, Japan) was recommended. Upon establishment of appropriate plaque control, scaling and root planing

Figure 1

Clinical appearance at the baseline. Note the extensive gingival desquamation, especially in the maxillary gingiva (A). At month 6 post-treatment, a significant improvement in gingival lesions was observed (B).

was performed. The instruction was also given to the patient to apply a steroidal ointment containing 0.1% dexamethasone (Dexaltin Oral Ointment 1mg/g, Nippon Kayaku, Tokyo, Japan) to gingival lesions once a day for 3 weeks. The re-evaluation indicated a need for surgical interventions in order to reduce periodontal pockets and inflammation. During the open flap debridement, maxillary central incisors with periapical lesions were extracted. The re-evaluation at 6 months post-operation revealed a significant improvement in gingival conditions (Fig. 1B). The supportive periodontal therapy (SPT) has been performed thereafter, with a 3-month recall schedule.

The mean total OHRQL score of 33 at the baseline was reduced to 15, showing an improvement in patient's perceived oral health-related quality of life. Among the OHRQL domains, pain, eating/chewing functions, social and psychological functions were the domains that showed marked improvement (Fig. 2).

Discussion

In the present case, in addition to the initial periodontal therapy, topical application of 0.1% dexamethasone (Dexaltin) was introduced as an adjunct modality. Because of the characteristics of its base material, the ointment can be easily applied onto gingiva, and it can remain on the surface for prolonged period. These interventions resulted in a significant improvement of the gingival lesions. Although CDG is usually unrelated to local plaque accumulation, it could aggravate the disease condition.[17] It is likely that the resolution of chronic inflammation including periodontal and periapical lesions further contributed to the improvement of CDG.

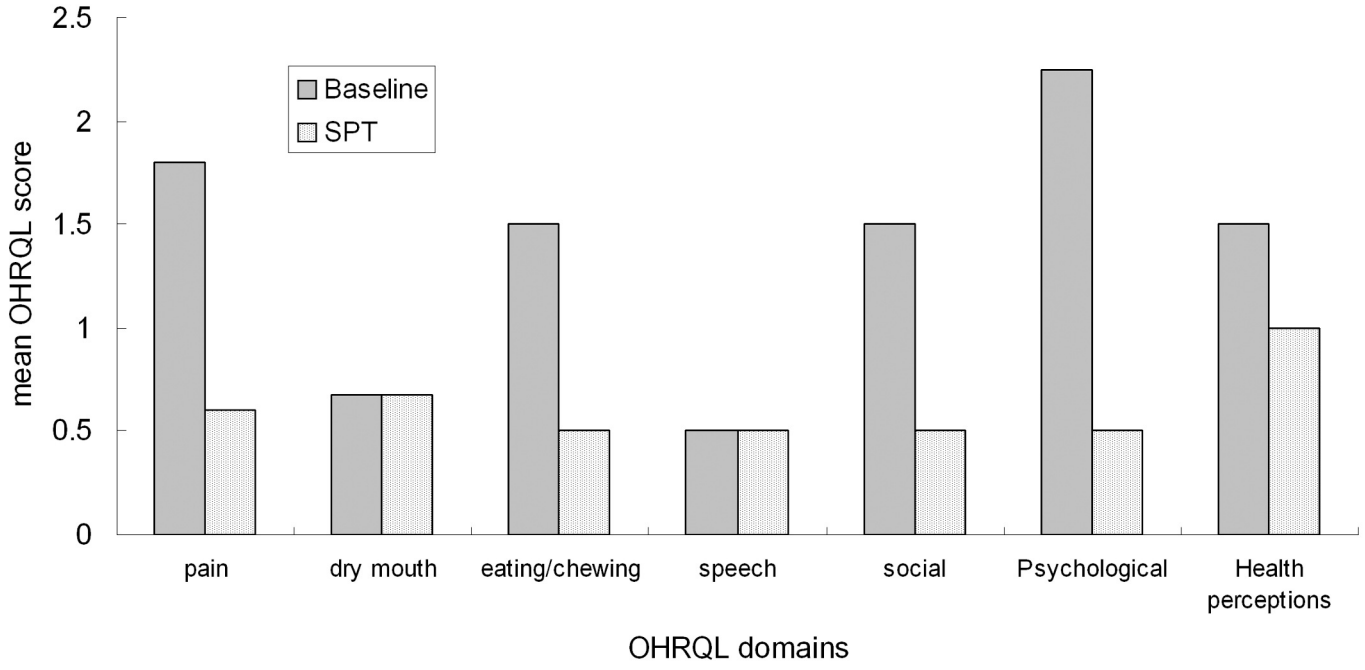

Figure 2

The mean score of OHRQL (Oral health-related quality of life) at the baseline and at the supportive periodontal therapy.

In periodontal treatment, patient perceptions of the disease or conditions are extremely important.[18] In the present case, the comprehensive treatment lead to not only resolution of CDG but also a positive impact in perceived life quality of the patient. Further research is needed to understand the impact of periodontal treatment on the oral health-related quality of life of patients with CDG and other mucocutaneous disorders.

CDG can be mistaken for plaque induced gingivitis and this can lead to delayed diagnosis and inappropriate treatment of serious dermatological diseases such as pemphigoid or pemphigus.[19-22] Pemphigus vulgaris is the most important subtype to occur in the mouth and it can be the initial site of presentation in 50% of cases. Alternatively the mouth may be the only site of involvement for about six months to a year before the skin is involved. For definitive diagnosis of these diseases, histopathological examination utilizing direct or indirect immunofluorescence is necessary.[23]

Periodontists and dermatologists need to collaborate with each other for comprehensive assessment, which could ultimately benefit the patient. Interdiciplinary care should contribute to a significant improvement in quality of life of patients with CDG.

In conclusion, CDG needs to be differentiated from other mucocutaneous disorders as early as possible because of its distinct prognosis. Clinicians are advised to conduct a mucosal evaluation during oral examinations and take a thorough medical history, which could ultimately benefit the patient. Comprehensive periodontal care can contribute to significant improvement in quality of life of a patient with CDG.

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