

Mucogingival Sugery in a Case of Chronic Desquamative Gingivitis

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Lichen planus (LP) is an inflammatory disease of the mucosae and the skin. LP can affect different parts of the oral mucosae (OLP) and also the keratinised gingiva. The atrophic erosive form of OLP in the gingival mucosae, called chronic desquamative gingivitis, induces a particular fragility with possible recessions and associated problems of sensibility and aesthetics. The purpose of this study is to evaluate the reliability of mucogingival surgery in preventing and/or correcting the periodontal recessions of chronic desquamative gingivitis and estimate the clinical evolution in time.

Key words: oral lichen planus, periodontal surgery, gingival recession, desquamative gingivitis

INTRODUCTION

Lichen planus (LP) is an inflammatory disease of the mucosae and the skin. It has a chronic course with periods of remission and relapse, the 'healing' is unpredictable but frequent.

Clinically the LP of the oral mucosa (OLP) can be classified in several form: atrophic, reticular, erosive, vesicular and bullous (Andreasen, 1968). The three major types are the atrophic, reticular and erosive (Chainani-Wu et al, 2001).

OLP is found more frequently among females who are between 30 and 70 years old (Conte et al, 1990). It alone represents the 5% of all oral pathology and the 0,9% of all dermatolotologic ambulatory pathology. Although the prevalence is high in the general population (between 0.2 and 4%), its etiology is unknown (Conte et al, 1990). Several aetiological factors have been suggested, such as drugs, infection, smoking, stress, autoimmune factors, genetic factors, chemicals, trauma and malnutrition (Tamizi and Moayedi, 1992; Katz et al, 1988).

Pathogenically is classifiable as an autoimmune disease process where an alteration of the ker-

atinocitis membrane antigen induces a citotoxic reaction of the T lymphocyte (Scully et al, 1998).

The histological aspect is characterised by:

- vacuolar degeneration of basal cells
- fragmentation of dense lamina
- lymphocyte infiltration
- hyperortokeratosis with a thickening of granulation layer and acantosis (Thornhill, 2001).

The anamnesis of patient must lead in diagnosis and some more in therapy. Indeed there are some OLP associated with:

- candida albicans
- chronic active hepatitis
- diabetes, vascular hypertension (Grinspan's syndrome)
- dermatopathology
- HIV.

The OLP is mainly asymptomatic, except the erythematous-atrophic form. The therapy can be based upon the psychosomatic component, through the administration of benzodiazepine (bromazepam-Lexotan), or improving the resistance of epithelium, through the administration of A vitamin and other



Table 1 Clinical values of the gingival recessions at baseline (A) and at three years control (B).

| | #4.1 | | #3.1 | | #3.2 | | #3.3 | | #3.4 | | #3.5 | |
|-------------------------|------|---|------|---|------|---|------|---|------|---|------|---|
| | A | B | A | B | A | B | A | B | A | B | A | B |
| Miller's classification | I | I | II | I | I | I | I | - | II | I | I | - |
| Recession width | 2 | 1 | 6 | 3 | 3 | 2 | 2 | 0 | 5 | 3 | 1 | 0 |
| Keratinised tissue | 3 | 6 | 0 | 6 | 3 | 6 | 3 | 6 | 0 | 7 | 4 | 8 |

retinoic acids (Goran et al, 1987; Giustina et al, 1986; Regezi et al, 1986). When OLP is symptomatic it can be relived by topical anaesthetic (Xylocaina). The treatment of LP consist also of the administration of corticosteroids (Tamizi and Moayedi, 1992). It is very important to remove all trauma, such as as dental caries, occlusal trauma and inadequate restorations.

The surgical therapy is suggested for the atrophic-erosive form because of a potential degenerative evolution that changes from 0.1% to 10% (Sigurgeirsson and Lindelof, 1991).

OLP can affect different parts of the oral mucosa with different incidence and clinical manifestations (Carbone et al, 1999). In the gingival mucosa the atrophic erosive form give rise to so-called chronic desquamative gingivitis (Boyd and Neldner, 1991; Markopoulos et al, 1996).

No therapeutical guidelines have ever been reported in the literature for cases where a chronic desquamative gingivitis coexists with gingival recession, and a surgical treatment for the latter is needed. The aim of the present study is to evaluate the reliability of muco-gingival surgery in preventing and/or correcting the periodontal recessions on chronic desquamative gingivitis and estimate the clinical evolution in time.

METHOD AND MATERIALS

In October 2001 a 43-year-old Caucasian female complaining of irritation and tenderness of her gingiva was referred to the Department of Periodontology of Bologna.

Medical history was non-contributory. Clinical and radiological examinations were performed.

The gingiva appeared erythematous, painful and

extremely hemorrhagic on slight trauma. Gingival recessions were detected on the buccal aspect of several teeth (Table 1) (Miller, 1985), whereas no pathological probing depth was found. Radiographically the interproximal bone level was normal. No other signs of tissue alterations were detected in the mouth.

The patient was referred for oral hygienic instruction and gross scaling by the dental hygienist.

Ten days later the patient was re-evaluated, and at this time the gingiva appeared slightly improved, but the initial particular aspect still remained. A diagnosis of chronic desquamative gingivitis was suggested. It was decided to treat the recessions on teeth 4.1-3.1-3.2 and 3.3-3.4-3.5 with free gingival grafts to restore an adequate amount of keratinised gingiva (Figs 1 and 2). A histological examination was planned for the first surgery to confirm diagnosis.

After local anaesthesia, performed with 3% carbocaine and 1:50.000 epinephrine (Astra, Zeneca), an intrasulcular incision was made and a partial-thickness flap elevated. An epithelial-connective tissue graft was harvested from the palate using a Paquette scalpel. The graft was placed in close contact, held in place by simple reabsorbable 5/0 sutures (Vicryl Rapid, Ethicon) and covered with a dressing (Fig 3).

As planned, during the first surgery a portion of tissue was removed. The histological sample included whether altered or healthy tissue and was about 4 x 5mm. Fixed in a 10% formalin solution, the sample was submitted for the histological analysis.

The patient was prescribed nimesulide (Aulin, Roche), 100 mg, every eight hours for two days and topical 1% chlorhexidine gluconate gel (Corsodyl, Smithkline Beecham) twice a day for



Fig 1 and 2 The clinical aspect of the marginal and attached gingiva around teeth 41-31-32 and teeth 33-34-35.



Fig 3 The epithelial-connective graft is placed in close contact; reabsorbable sutures are used.



Fig 4 One week after placement of free gingival graft, good healing is present.

one week. The same protocol was followed also during the second muco-gingival surgery performed.

RESULTS

No post-surgical complications were reported by the patient during the control visits. A good healing of the graft was always present (Fig 4). Histological examination revealed the diagnosis of OLP. The results obtained were stable during the control visits and also after three years (Table 1). The clinical aspect of the grafts appeared healthy in time without any involvement from the surrounding lesion (Figs 5 and 6). During the observation period no remission of the clinical aspect of gingiva not involved in the surgical treatment was noted (Fig 7).

DISCUSSION

LP is a fairly widespread pathology, but there are still many uncertainties as far as aetiology and therapy are concerned. From a pathognomonic point of view, it is possible to attribute it to an autoimmune process that induces the degeneration of epithelium's basal cells and consequently causes a cytotoxic reaction of T-lymphocytes (Scully et al, 1998). As a result, it is commonly suggested to control its progression through topical corticosteroids and retinoids applications (Tamizi and Moayedi, 1992).

OLP can affect the gums, clinically showing as a gingivitis and currently defined as chronic desquamative gingivitis (Boyd and Neldner, 1991; Markopoulos et al, 1996). In the case reported here the chronic desquamative gingivitis was also



Fig 5 and 6 Three-year control. The clinical aspect of the grafted tissue appeared healthy, and no sign of recurrence is presents.



Fig 7 Three-year control. The typical aspect of OLP is still present in all the keratinised gingival, except in the surgically treated areas.

associated with gingival recessions. We suggest that this association is not unusual, but we do not know if the pathological alteration of the tissues can lead to this kind of periodontal destruction, especially in a thin periodontal biotype. Of course, the erythematous aspect of the gum had driven the patient to an excessive and traumatic hygiene behaviour leading to a possible development of periodontal recessions.

This kind of periodontal alteration can be limited or resolved with muco-gingival surgery, especially with the use of tissue grafts.

The patient in this study needed such a therapeutic approach, but surgical operation was limited by the lack of knowledge about possible reactions of the chronic desquamative gingivitis.

At any rate, the therapy did not find relevant restrictions during the surgical phase, except a marked weakness of the tissue affected by the lesion and the risk of its laceration.

Particularly interesting is the continuance of the result after three years, a period during which the grafted tissue remains intact despite the affected tissues still next to it. Besides, the features of the grafted tissue will probably be maintained intact for more than three years (Cecchi and Schonfeld, 1989).

In 1992, Tamizi and Moayedi also described a case of gingival OLP which was treated with a connective-epithelium graft, and the same results were achieved in relation to the hold and to the absence of relapse after three-and-a-half years. Unlike in our report, in their clinical case all the diseased soft tissues were removed carefully.

The resistance of the tissue we grafted to the surrounding OLP implies some more considerations.

The immunological degeneration of the basal layer does not involve the grafted tissue even after three years (Alario et al, 1978; Giannotti et al, 1983). Why should this be?

The findings of a study published in 1984 is remarkable: after inserting grafts of gingival tissue affected by OLP into healthy tissue and vice versa, the tissue itself kept maintaining the donor part's features (Pini Prato et al, 1984). In other words, the graft had conditioned the absence or presence of the pathologic process. This result was confirmed after an eight-month control period. The authors concluded that the results they described find their explanation in the survival of the epithelium's basal layer. Actually, in normal healing of a gingival graft the connective tissue and the epithelium's basal layer

