Erosive Lichen Planus of the Oral Cavity: A Case Report

P Rajesh Raj1, Nadah Najeeb Rawther1, Jittin James2, KP Siyad3, Sheeba Padiyath4

1Post Graduate Student, Department of Oral Medicine and Radiology, Mar Baselios Dental College, Kerala, India, 2Senior Lecturer, Department of Prosthodontics, Mar Baselios Dental College, Kerala, India, 3Senior Lecturer, Department of Periodontics, Indira Gandhi Dental College, Kerala, India, 4Reader, Department of Oral Medicine and Radiology, Mar Baselios Dental College, Kerala, India

Abstract

Erosive lichen planus (LP) is a clinical form of oral LP characterized by the bilateral presentation of erosive and erythematous areas in the oral cavity usually the buccal mucosa with predominance in middle aged females with undue stress factors. In this article, we are giving a case report of a 56-year-old female patient who came to our Department of Oral Medicine and Radiology with a chief complaint of burning sensation of the mouth to hot and spicy food. The diagnosis was given as erosive LP. We also aim to review the literature and management of the lesion with reference to the same.

Keywords: Burning sensation, Erosive lichen planus, Oral lichen planus, Topical steroids, Wickham's striae

INTRODUCTION

Oral lichen planus (OLP) derived from the Greek word “Leichen” meaning tree moss and Latin word “planus” meaning flat/even. It was first described in 1869 by Dr. Erasmus Wilsonas.1 This is a common immune-mediated disorder that affects stratified squamous epithelium and is of unknown etiology. It is seen worldwide, mostly in the fifth to sixth decades of life,2 frequently in the middle aged and occasionally in children. This lesion is twice more common in women than in men with a bilateral presentation.3 It is often a painful and debilitating disease, and the treatment is aimed at palliation rather than cure.4 In such lesions, corticosteroids are considered to be the mainstay of treatment which can be used either topically, intralesionally or systemically.

Here we are also presenting a case report of an erosive type of LP where the patient was symptomatic. She was also undergoing a stressful phase of her life. When she was given a topical and systemic steroid combination along with psychiatric counseling active lesions stopped occurring when she was being reviewed after 6 months.

CASE REPORT

The 56-year-old female patient came to the Department of Oral Medicine and Radiology with a chief complaint of burning sensation of the entire oral cavity to hot and spicy foods. Burning sensation started almost 2 months back which was insidious in nature and aggravated on having spicy food. Presently, she complained of difficulty in having even soft foods. Dental history showed that she had uneventful extractions. Her medical history revealed that she was a victim of hypertension and hyperlipidemia and is under medications. Personal history showed that she had a mixed diet and was presently under stress and tension.

On intraoral examination, there were erythematous areas with scattered, irregular white keratotic flecks on the right and left buccal mucosa. On the left side, the lesion was about 1.5 cm × 1 cm situated along the premolar and molar regions, respectively (Figure 1).
On the right side, the lesion was about 2.5 cm × 1 cm situated along the third molar region (Figure 2). Adjacent mucosa appeared normal. On palpation all inspection findings were confirmed and the lesion was non-tender.

The patient was advised for biopsy and was subjected to routine blood investigations. Fasting blood sugar was found to be 92 mg/dl.

During her treatment period, she was given topical steroids along with systemic steroids. Initially, she was being reviewed at an interval of every 1-2 weeks for 6 months. When active lesions had stopped forming, the doses of the medications were being tapered and she was being reviewed after every 6 months period.

When the patient was reviewed at the end of 6 months, the lesions had completely resolved, and the patient had a better outlook to life (Figures 3 and 4).

**DISCUSSION**

OLP is a common chronic inflammatory and immunological mucocutaneous disorder\(^1\) that varies in appearance from keratotic (reticular or plaque like) to erythematous and ulcerative clinical forms.\(^2\) In the year 1869, it was Erasmus Wilson who first named the skin lesion. In 1895, Thieberg identified the oral lesion.\(^3\)

1-2% of the population worldwide suffers from OLP. 1.5-2% of the Indian population suffers from this disease. Female predilection was found with a male to female ratio of 1:2 especially among the middle aged.\(^6,7\) In our case, the patient was in her fifth decade of life.

The different etiological factors considered for LP are genetic background, drugs, autoimmunity, immunodeficiency, stress, diabetes, hypertension, malignant neoplasm, and bowel disease.\(^8\) The various koebnerogenic factors are dental materials, an infectious agent such as human papillomavirus, food allergy, habits...
like lip chewing, and trauma from sharp cusps. Our patient was in undue stress because of family problems.

It has been suggested that OLP has a close association with stress and high anxiety levels. During this time there is the increase in the blood cortisol level and salivary cortisol levels leading to the conclusion that psychological factors are strongly associated with this disease entity.

The pathogenesis of LP is due to four main mechanisms: Antigen-specific cell-mediated immune response, humoral immunity, autoimmune response, and non-specific mechanisms.

Patients with OLP frequently have the concomitant disease in one or more extra-oral sites also. The common sites of occurrence in erosive, LP is the mouth, esophagus, and the anogenital region.

The classic appearance of skin lesions is being described by the six p’s: planar, plaque, pruritic, purple, polygonal, and popular. Typically skin lesions develop after the appearance of oral lesions and it has been found that the severity of oral lesions does not correlate with the skin lesions. The most frequent extra-oral site in 20% of female patients with OLP is the genital mucosa where the erosive form of disease is the predominant type.

The red and white components of the oral lesions can be part of following textures.

Reticular - Characterized by the presence of fine lacy white streaks or striae in an annular, circular or interlocking pattern (Honiton lace). In the periphery of the striaations there is often an erythematous zone, which reflects the subepithelial inflammation. Most frequent site of occurrence is the buccal mucosa and the mucobuccal fold and rarely on mucosal side of lips, tongue and gingival.

Papular: Present in the initial phase of disease, clinically characterized by small pinpoint white dots of size approximately 0.5 mm which in most intermingles with reticular form giving a pebbly white or gray appearance. These are often missed during diagnosis and are asymptomatic.

Plaque like: Characterized by large homogenous well demarcated white plaque often but not always surrounded by striae resembling proliferative verrucous leukoplakia. Mostly found on the tongue and buccal mucosa. This is usually found in tobacco smokers and has a poor prognosis.

Erythematous or atrophic: Characterized by homogenous red area with striations frequently seen at periphery. Some patients may also present with erythematous OLP of attached gingival which is a common site of occurrence of atrophic LP, representing desquamative gingivitis.

Erosive: Ulcerative and bullous - Ulcerative and bullous types are the most devastating. Clinically this lesion presents as fibrin coated ulcers within the plaques surrounded by an erythematous zone frequently displaying radiating white striae. Size of the bullae varies from 4 mm to 2 cm and ruptures easily leaving behind an erythematous area. Common sites are there tongue and buccal mucosa at the line of occlusion particularly adjacent to the second and third molar region. These lesions can affect the quality of a patient’s life as it is symptomatic.

According to the above literature, our patient had an erosive type of LP with erythematous areas and fine radiating striae and she was symptomatic with burning sensations.

The classical clinical presentation of the lesion is sufficient to make an accurate diagnosis. An oral biopsy of the lesion with histopathologic confirmation is recommended to confirm the clinical diagnosis and also to exclude chances of dysplasia and malignancy. Direct immunofluorescence giving a band like pattern due to the deposition of fibrinogen in the basement membrane zone and enzyme-linked immunosorbent assays can also be helpful in reaching the confirmation of the diagnosis, especially when desquamative gingivitis is also present.

The classic histopathological features include a dense, continuous, band-like lymphocytic infiltration with “jagged” or “sawtooth” shaped rete ridges of the basal layer. The dermal papillae between the elongated rete ridges are frequently dome shaped. Necrotic keratinocytes are often observed in the basal layer. Eosinophilic remnants of anucleate apoptotic basal cells may also be found and are referred to as “colloid or civatte bodies.” Even in our case similar histopathological features were seen (Figure 5).

The differential diagnosis involves lichenoid reactions, leukoplakia, candidiasis, erythema multiforme, pemphigus vulgaris, bullous pemphigoid, secondary syphilis, and lupus erythematosus.

Until date, there is no cure for OLP or for its dermal counterpart. The goal of the treatment is to relieve the symptoms of the patients and to monitor the dysplastic changes rather than cure.

Corticosteroids have proved to be effective medications for controlling signs and symptoms of five, these immunological diseases. The following topical medications have been tried in the short-term treatment...
of OLP which was being proved by authors in several studies: Fluocinonide 0.05% in an adhesive base, Betamethasone was used in symptomatic OLP; hydrocortisone hemisuccinate aqueous solutions; fluticasone propionate spray and betamethasone sodium phosphate mouth rinse; mometasone furoate microemulsion; clo asbestos propionate (a very potent topical steroid) 0.05% in various forms such as orabase, ointment, sprays, or aqueous solution showed its effectiveness to relieve pain in erosive forms of OLP in many studied subjects; Tray application of clobetasol propionate orabase paste 0.05% with 100,000 IU/ml nystatin appeared to be efficacious for severe erosive gingival lesions and showed complete response in 33 cases over 48 weeks period and was also found to be as useful as tacrolimus 0.1% in treatment of OLP in another study. 

Triamcinolone acetonide 0.1% in orabase showed better results than cyclosporine solution, pimecrolimus 1% cream. Betamethasone oral minipulse therapy and fluocinolone acetonide 0.1% orabas. Aloe vera gel showed 6 times better results in at least 50% improvement of pain symptoms.

Several side-effects were reported with topical steroids, but none was serious. The main side-effects were oral candida infection and pain or discomfort in the upper abdomen. Temporary burning sensation was a common side-effect reported with tacrolimus 0.1% ointment and pimecrolimus 0.1% cream. Atrophic or erosive lesions can pose problems during tooth brushing due to the gingival involvement leading to accumulation of dental plaque and candidal infections. So, intensive oral hygiene practices can enhance healing of such lesions.

For those lesions not responding to topical therapy intralvesional corticosteroids were being used. The drug of choice here was triamcinolone acetonide 5 mg/ml combined with a local anesthetic. For severe exacerbations of OLP systemic steroids have been indicated. Depending on the severity of lesion prednisone 30-60 mg is usually administered.

Retinoids are frequently used in combination with topical steroids as adjuvant therapy. Cyclosporin mouth rinse (containing 100 mg of cyclosporine per milliliter) has been used three times daily.

Apart from the above, other treatment modalities used were dapsonate 100 mg once daily for 3 months, PUVA therapy, azathioprine: 150 mg/day, levamisole: 150 mg/day for 3 consecutive days in 1 week, thalidomide: 200 mg/day or topical 1% paste, griseofulvin have reported to be effective in treatment of OLP in various case reports.

We had given a combination of topical and systemic steroids. She was also advised to undertake psychological counseling so as to manage her stress.

In a study, the rate of malignant transformation is reported to be between 0.4% and 5% when it was observed from 0.5 to 20 years. Compared to all forms of LP, it is erosive LP that has a higher rate for malignant transformation. A case of carcinoma arising from OLP was first described in 1910 by Hallopeau.

CONCLUSION

The term OLP is a T-cell-mediated heterogeneous group of disease with associated mucosal lesions, caused by multifactorial agents, which is often painful and debilitating. Topical steroids used alone or in combination with other immunomodulatory topical agents is a widely accepted first choice of relief in most patients. Prolonged use of systemic medications and elimination of the causative factor is essential to eradicate the disease. Since there is a close association of OLP with psychological factors like stress, psychiatric counseling can also prove to be beneficial in the treatment line. Long-term follow-up of the patients due to its malignant tendency is also a must. All treatments are non-specific and are directed at relief of the symptoms of inflammation and are therefore only partially successful.

REFERENCES

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