ORIGINAL RESEARCH PAPER

Dentistry

MANAGEMENT OF A PATIENT WITH ORAL LICHEN PLANUS IN NEED OF A COMPLETE DENTURE: A CLINICAL REPORT

KEY WORDS: erosive lichen planus, temporary denture base, complete denture, topical corticosteroid, lesion

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ABSTRACT

Oral lichen planus is a chronic mucosal condition usually encountered in clinical dental practice. Lichen planus has various oral manifestations. The erosive form of Oral lichen planus is less common, yet is most likely to cause symptoms. This clinical report describes the treatment of a patient in need of a complete denture who presented with severe erosive lichen planus. Topical corticosteroids constitute the mainstay of treatment for symptomatic lesions of Oral lichen planus. In conjunction with a temporary denture base, clobetasol propionate ointment (0.05%), a topical corticosteroid agent, was applied topically over the lesions, till the denture delivery. Later, complete denture served as a carrier for the topical clobetasol ointment. Complete denture was fabricated with modifications in the procedures. The temporary denture base and complete denture overcame the problem of the obtaining of an appropriate carrier for the application of the topical corticosteroids. This allowed the patient to tolerate the prosthesis without pain, thereby improving his quality of life. Based on the observed increased risk of candidosis and malignant development, the patient is called for follow up at 3-months interval.

INTRODUCTION

Lichen planus is a chronic inflammatory mucocutaneous disease that is considered to be an immunologically mediated process.[1] This condition can affect the skin, oral mucosa, or both. Clinically, the central area of the lesion is ulcerated and a fibrinous plaque or pseudo-membrane covers the ulcer. The periphery of the lesion is usually surrounded by reticular or radiating keratotic striae that become painful when the pseudo-membrane is disturbed.[2] Trauma is considered to be the mechanism by which various etiological factors exert their effects. As part of the dental treatment, irritating factors must be removed and teeth with sharp cusps must be recontoured. Erosive lichen planus can be treated systemically and locally. [2,3,4] Systemic therapy with corticosteroids is indicated for lesions that do not respond to a local treatment. Local therapy includes dexamethasone mouth rinses and triamcinolone or clobetasol steroids applied over the lesions on a daily basis. Other agents used are cyclosporine, azathioprine and levamisole. Alejandro Rabanal et al used tacrolimus (0.1%) ointment, an immunosuppressive agent in conjunction with an immediate complete denture[4]. Lisa Harpenau et al determined the effectiveness of a low dose cyclosporine in treatment oral erosive lichen planus.[5] But, adverse effects of systemic Cyclosporine on renal function negate its long-term use in oral lichen planus.[6] The aims of current OLP therapy are to eliminate mucosal erythema and ulceration, alleviate symptoms and reduce the risk of oral cancer in OLP patient.[7]

The purpose of this clinical report is to present the treatment of a patient with severe erosive lichen planus in need of a complete denture, treated with clobetasol propionate ointment 0.05%, a topical corticosteroid.

Clinical Report

A 60-year-old man presented to the Department of Prosthodontics in a Dental College & Hospital, Kolkata, WB, with a complaint of 'difficulty in chewing due to missing teeth' and 'burning sensation in mouth'. Intraoral examination revealed completely edentulous maxillary and mandibular ridges with multiple lesions on the crests of edentulous maxillary and mandibular ridges (figure 1,2). Lesions were in form of erythematous shallow ulcers and were painful on palpation. Patient reported burning sensation to spicy food. No cutaneous or genital lesions were present or reported. A clinical diagnosis of erosive lichen planus was confirmed by histological evaluations of biopsy specimen. Palliative and supportive treatment was provided with periodic use of prednisolone 5mg, a systemic corticosteroid, for one week. Lesions subsided slightly with use of prednisolone after one week. Considering potential systemic side effects of prednisolone, patient was maintained on triamcinolone (TESS ointment), a low potency topical corticosteroid. After a period of 10 days, lesions aggravated again. This would be due to lack of adherence of topical corticosteroid to mucosa. Hence, it was decided to prescribe clobetasol propionate 0.05% (Tenovate ointment), a high potency topical corticosteroid and give a temporary denture base to patient, which would act as carrier for topical agent.

Patient was preferably given morning appointments to avoid stress. Primary impression was made with an irreversible hydrocolloid impression material (MEC ALGIN) and casts were poured using type II dental stone (GOLDSTONE). Impression compound was not used deliberately to avoid thermal trauma. Custom trays were fabricated on primary impression casts using acrylic resin tray material. Border moulding was done using medium-body polyether impression material (Impregum Soft), instead of Green-stick wax, to minimize thermal irritation. Final impression was made using medium body polyether impression material (Impregum Soft), using selective pressure technique. Zinc oxide-Eugenol paste was avoided to avoid chemical irritation. casts were poured in type IV dental stone (DENTOFLO). Maxillary and mandibular temporary denture bases were fabricated using Heat-cure acrylic resin (Acralyn-H). Temporary denture bases were evaluated intraorally for any ill-fitting borders. Patient was instructed to apply Clobetasol propionate ointment (0.05%) on the intaglio surface of temporary denture bases,3 times a day (Figure 3). Patient was called after 10 days for follow-up. Lesions were not completely eliminated, but mildly ulcerated and not painful (Figure 4,5). Jaw relations were recorded and teeth arrangement was done using Semi-anatomic teeth to minimize stress over the ridges. Patient was called for intraoral evaluation of trial dentures to check any occlusal discrepancies. Maxillary and mandibular dentures were fabricated using Heat-cure acrylic resin (Acralyn-H). Dentures with smoothened borders were finished and polished. Complete dentures were inserted and intraoral evaluation was done to check for any sharp denture borders (Figure 6). The patient was instructed to place the clobetasol ointment on the intaglio surface of complete dentures, twice daily, before insertion. After 2 weeks, lesions had completely

subsided (Figure 7,8). Patient is under regular follow-up since last 9 months.

Fig. 1 - Pre-treatment Lesion-maxilla

Fig. 2 - Pre-treatment Lesion-mandible

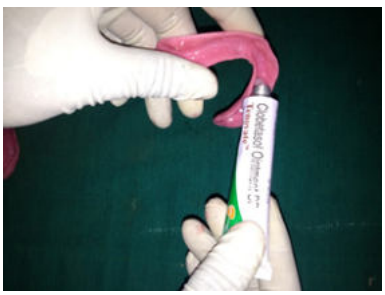

Fig. 3 - Application Of Clobetasol On Intaglio Surface Of Denture Base

Fig. 4 & 5 - After 10 Days Use Of Temporary Denture Base - maxilla & Mandibule

Fig. 6- Insertion Of Complete Dentures

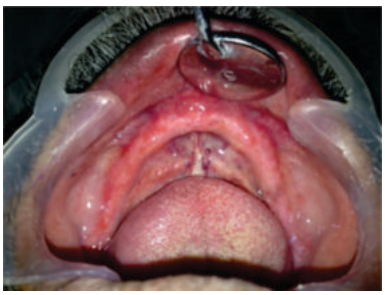

Fig. 7 & 8 - After Use Of Final Complete Denture- maxillary & Mandibular Arch

DISCUSSION

Systemic corticosteroids were used initially for short span (7 days) for temporary relief. Considering potential side effects of systemic corticosteroid, patient was maintained on a low potency corticosteroid triamcinolone. Then, use of denture bases in conjunction with high potency topical corticosteroid, clobetasol ointment was considered. Denture bases used as carrier for application of topical corticosteroid signify the Occlusive Steroid Therapy (OST). A high potency corticosteroid was found to be effective in this case than a low potency corticosteroid. Healing of lesions when clobetasol ointment used with denture bases was due to the fact that clobetasol ointment remained in the area and not immediately washed away with saliva. Denture fabrication with alternate techniques caused least trauma to mucosa. Later, Complete dentures served as carrier for clobetasol ointment. The patient was free of pain and able to function with the complete dentures. Patient education was done for maintenance of oral hygiene. The patient has been under continuous care, since the placement of the prosthesis. He reported that the esthetic improvement and ability to eat made the treatment worthwhile.

Summary

This report presents the management of a patient with severe erosive lichen planus in need of a complete denture. The patient was able to tolerate the complete denture well and his quality of life was improved.

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