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Intra Oral Prosthetic Device as an Adjunct Therapy for Treatment of Erythema Multiforme: A Case Report

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Case Report

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ABSTRACT

Erythema Multiforme (EM) is an acute inflammatory disease of the skin and mucous membranes that causes a variety of skin lesions—hence the name "multiforme." The oral lesions, typically inflammatory, are accompanied by rapidly rupturing vesicles and bullae. EM has several clinical presentations: from milder self-limiting form to severe life-threatening form that may present as either Stevens-Johnson syndrome or Toxic Epidermal Necrolysis (TEN).[1] The most common triggers for episodes of EM are herpes simplex virus and drug reactions.[2] EM includes both generalized symptoms such as fever and malaise and oral lesions starting as bullae on an erythematous base which break rapidly into irregular ulcers.[1] Analysis of the dental literature indicated limited evidence about the use of dental removable prosthesis in oral lesions manifested by EM.[3,4] This case report describes a multi-disciplinary approach for the treatment of erythema multiforme with the use of the intra-oral dental prosthetic device.

Keywords: Erythema Multiforme, U Clasp, Permissive Maxillary, Full Coverage, Occlusal Splint.

Introduction

EM is an immune-mediated disease that may be initiated either by deposition of immune complexes in the superficial microvasculature of skin and mucosa, or cell-mediated immunity. The most common triggers for episodes of EM are herpes simplex virus and drug reactions. A majority of the severe cases of Stevens-Johnson syndrome or TEN are caused by drug reactions. The drugs most frequently associated with EM reactions are Oxycam, a class of non-steroidal anti-inflammatory drugs (NSAIDs); sulfonamides; trimethoprim-sulfonamide combinations, allopurinol, and penicillin. Oral lesions commonly appear along with skin lesions in approximately 70% of EM patients.[5] The diagnosis can be made on the basis of the size, shape, color, and distribution of the target lesions. Although the histopathology is not specific, two major histologic patterns have been described: an epidermal pattern characterized by lichenoid vasculitis and intra-epidermal vesicles, and a dermal pattern characterized by lymphocytic vasculitis and sub-epidermal

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vesiculation.[6] Many cases of EM continue to have no obvious detectable cause after extensive testing for underlying systemic disease and allergy and are labeled idiopathic. The treatment comprises a well-coordinated systemic approach in harmony with an oral approach for enhanced healing of the lesion. This case report presents an adjunct oral therapy to the systemic line of treatment by use of the dental intra-oral prosthetic device.

Case Report: A 35 years old male patient reported to Grace - Dental and Skincare (Kolhapur), with the chief complaint of bleeding from lips, and inability to open the mouth with pain and tenderness around the affected area. On examination, the presence of non-specific bullaemic lesions on the extremities was seen. On Oral examination, hemorrhagic lesions covered the lower lip completely and only the middle part of the upper lip was involved [Figure 1].

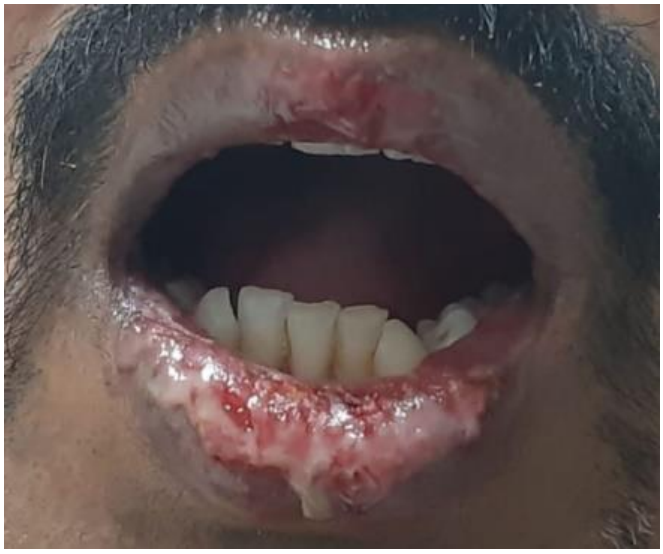

Figure 1: Haemorrhagic Lips

Intra-oral ulcers and blisters were present on the buccal mucosa and tongue. Inflammation of uvula and pterygomandibular raphe was seen leading to a reduction in the mouth opening. The diagnosis was made with the help of clinical examination, history, and screening with the Herpes (HSV) Test. The treatment plan included a multi-disciplinary approach with systemic methylprednisolone 16mg daily along with amoxicillin and clavulanic antibiotics orally and topically fusidic acid ointment. Patient developed two vertical bands at the borders of the ulcers margin due to which both the lips were stuck to each other and hence he was not able to open his mouth. So we cut opened the adhesion with surgical scissor under local anesthesia with 2% adrenaline. To keep both the lips separated from each other an intra-oral prosthetic appliance was planned in same visit to facilitate healing of the lesion.

To fabricate the device, maxillary and mandibular primary impressions were made with irreversible hydrocolloid impression material using stock trays. Impressions were poured in Type III gypsum product and diagnostic casts were obtained. A removable occlusal splint was fabricated by sprinkle-on method with a self-cure acrylic resin material (DPI) on the maxillary arch. The splint was fabricated such that it covered only the occlusal aspect and retained by a U clasp on tooth no. 16 (maxillary right permanent first molar) and 26 (maxillary left permanent first molar), keeping in mind the prosthesis height to be 2mm which will maintain both the upper and lower lips apart from each other [Figure 2].

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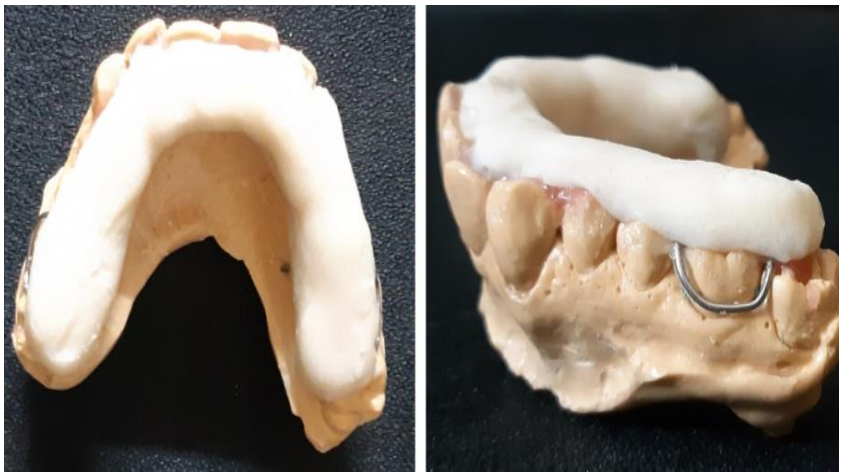

Figure 2: Maxillary Occlusal splint with U clasp

The patient was instructed to wear the prosthesis intra-orally for a week at night time for 6- 8 hours so that both the lips are separated from each other and the healing becomes faster [Figure 3].

Figure 3: Prosthesis Intra oral Insertion

This treatment was carried out for a week. After one week, the patient underwent periodic follow-ups to assess any complication(s) or worsening of the affected oral mucosa due to the foreign body represented by the removable prosthesis. It was observed that within 10 days, the patient's visible extra-oral and intra-oral affected areas were healed completely [Figure 4].

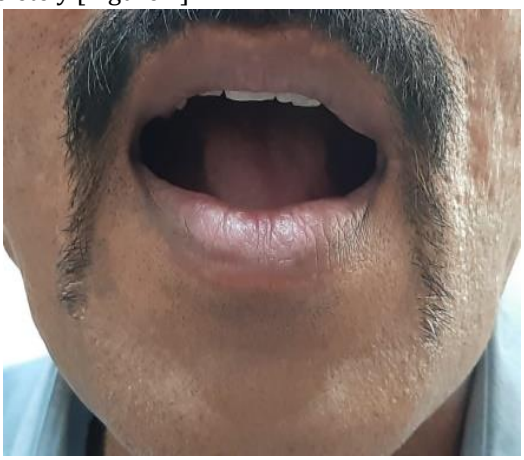

Figure 4: Post Healing

Discussion: Erythema multiforme (EM) is a dermatologic disease which also has oral manifestations. EM is clinically characterized by a "minor" form and a "major" form. It presents a diagnostic dilemma because the oral cavity has the ability to produce varied manifestations.[7] It is seen most frequently in children and young adults and is rare after 50 years of age. It has an acute or even an explosive onset; generalized symptoms such as fever and malaise appear in severe cases. EM simplex is a self-limiting form of the disease and is characterized by macules and papules 0.5 to 2 cm in diameter, appearing in a symmetric distribution. The most common cutaneous areas involved are the hands, feet, and extensor surfaces of the elbows and knees. Oral lesions commonly appear along with skin lesions in approximately 70% of EM patients.

The oral lesions start as bullae on an erythematous base, but intact bullae are rarely seen by the clinician because they break rapidly into irregular ulcers. Lesions may occur anywhere on the oral mucosa with EM, but the involvement of the lips is especially prominent, and gingival involvement is rare. This is an important criterion for distinguishing EM from primary herpes simplex infection, in which generalized gingival involvement is characteristic.

Treatment modalities depend upon the severity of the lesions. Mild cases of oral EM may be treated with supportive measures only, including topical anesthetic mouthwashes and a soft or liquid diet. Moderate to severe oral EM may be treated with a short course of systemic corticosteroids in patients without significant contraindications to their use. An initial dose of 30 mg/day to 50 mg/day of prednisone or methylprednisolone for several days, which is then tapered, is helpful in shortening the healing time of EM, particularly when therapy is started early in the course of the disease.

The use of removable appliances in oral lesions is documented in the literature for rapid healing.[3,4,8-10] EM may represent a severe complication in the management of edentulous or partially dentate patients because of the priority of care in handling the oral tissues. Oral signs are characterized by erosions or flaccid bullae, which are extremely fragile when subjected to the slightest mechanical irritation, with a tendency to bleed and sheer when subjected to minor trauma. Henceforth, In this case, report, a removable prosthetic appliance was given to the patient as an adjunct therapy for the treatment of erythema multiforme. The dental intra-oral prosthetic device is intended to separate the lips to aid in the healing of the lesions of EM.

Conclusion: The ulcerated painful intra-oral and extra-oral condition of the mouth at the time of the disease results in a lack of maintaining good oral hygiene which results in an increased need for prosthetic services. Such patients can be successfully treated in the dental clinic if there is strict adherence to modern prosthetic principles. Innovative painless procedures such as placement of permissive maxillary full coverage occlusal splints have resulted in faster healing of EM lesions and a higher degree of patient comfort.

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