



ORIGINAL RESEARCH PAPER

Dentistry

EROSIVE ORAL LICHEN PLANUS AND COVID - 19:- CASE REPORT.

KEY WORDS:

Dr. Anil	(Reader) Oral and Maxillofacial surgery Vishnu Dental college, Andhra pradesh.
Dr. Arif Mohiddin*	M. D. S Clinical tutor/ demonstrator, Department of Dentistry IPGME&R / SSKM hospital, kolkata, west bengal. *Corresponding Author
Dr. B. Sujith Anand	M. D. S Assistant professor (public health dentistry) ANIL NEERUKONDA INSTITUTE OF DENTAL SCIENCES(ANIDS). Andhra pradesh.
Dr D Thirumal Rao	MDS senior lecturer Adhiparasakthi Dental College And Hospital.

INTRODUCTION:-

Lichen planus is a chronic mucocutaneous inflammatory disease detected in 1–2% of the population. It affects mucous membranes and/ or skin with a wide spectrum of clinical and histopathological manifestations. It is common in females more than males especially over 40 years old.^{1,2,19}

Consequently, SARS-CoV-2 infection may represent an antigen that triggers this inflammatory cascade. SARS-CoV-2 can induce wide alteration in the cellular as well as the humoral immune response. The immunological changes triggered by COVID-19 infection are similar to the alterations detected in the oral lichen planus. Consequently, in the long-term follows up of survivor patients of COVID-19 infection, oral health practitioners as well as dermatologists may detect an increased incidence of lichen planus.^{3,4,5}

Although wide varieties of oral manifestations have been detected after COVID-19 infection, very few cases of oral lichen planus were reported. In this report, we describe a unique case of oral erosive lichen planus that was detected in a male patient one month after COVID-19 infection.³

This disease Cause by abnormal cell mediated immune response of both T4 & T8 lymphocytes in basal epithelial cells.

Case Presentation:-

A 28 year old male came to our Dental department with a chief complaint of burning sensation and Ulcerative area in the oral cavity since a duration of 2 months. The Ulcerative areas seen on both sides of cheek and ventral surface of Tongue . The Patient's medical and family history were non-contributory. On examination, an interlacing white striae with erythematous borders giving a web-like appearance were seen on one side of buccal mucosa (figure - 1), and on other sides of buccal mucosa erythematous area observed (figure - 2). On palpation the lesion was unscrapable. Based on the clinical presentation a provisional diagnosis of Erosive lichen planus But as the patient was not willing for biopsy then, he was advised a regimen of anti-oxidant(Cap.BEVON) and combination of topical cortico-steroids(Tacroz ointment®) and retinoid (Isotretinoin cream 0.05%)for 12 weeks. Patient was asked to report for periodic recalls every week. The result was excellent and after a period of just two to three months the lesion had regressed completely and the patient's oral mucosa was back to normal. Patient was further recalled every week for next six months; no incidence of recurrence was seen.

DISCUSSION:-

Lichen planus is a altered immune response characterized by a inflammatory infiltrate, that may represent apoptotic epithelial cells, and degeneration of the basal epithelial

layer.⁶ Oral lichen planus can envelop on any mucosal surface including larynx and oesophagus but lesions have predilection for the posterior buccal mucosa. The specific etiology of oral lichen planus is till now mostly unknown.^{7,8}

Many controversies exist about the pathogenesis of Oral lichen planus. The various mechanisms hypothesized to be involved in.⁹

the immuno pathogenesis are:

- Antigen-specific mechanism.
- Non-specific mechanisms.
- Auto immuneresponse. Humoral immunity.

A wide variety of oral and skin manifestations have been detected in patients with a history of COVID-19 infection.¹⁰ This report presents a unique case of oral lesions of erosive lichen planus which were detected 4 weeks after COVID-19 infection. Various factors are affecting the oral mucosa resulting in appearance of different lesions. Stress, infections, and bad oral hygiene represent the most common factors disturbing the oral mucosa.¹¹ The surge in fear and stress during COVID-19 pandemic may be due to placing people in quarantine, travel restrictions, fear of losing livelihood and loved ones and phobia of contracting the infection.¹²

In a retrospective study performed by Fidan et al., among 58 patients of COVID-19 who developed oral lesions, 12 patients developed oral lichen planus.¹³

Burgos-Blasco et al. reported a 56-year-old female with bilateral lace-like pattern of oral lichen planus on buccal mucosa without skin lesion after COVID-19 infection.¹⁰

Diaz-Guimaraens et al. reported a case of 52 years old female with a pruritic solitary black annular skin lesion on the right shin that was noticed 5 days after the start of COVID-19 symptoms. In addition, a bilateral buccal mucosa showed reticular white lines in a lace-like pattern. A Skin Biopsy was performed to confirm the diagnosis of lichen Planus however the authors didn't report a biopsy from the oral lesion.¹⁴

COVID-19 was reported to cause immune dysregulation especially in the T-T lymphocyte subset resulting in reduced cellular immune response [5]. CD8T-cell in COVID-19 was found in a higher number and hyperactivated state as indicated by CD69, CD38 and CD44 expression.^{15,16}

Despite viruses were reported as a triggering factor in oral lichen planus, the association between oral lichen planus and COVID-19 may have been coincidental.^{17,18}

Treatment:-

Anti oxidant:- capsule.BEVON.

Retinoid:- Isotretinoin 0.05% gel.
 Topical steroid:- Tacrolimus :-0.1% gel.

Study design

Case report.

Ethical approval

The data presented in the current case report is reviewed and approved by the Ethical Committee at our center.

Sources of funding

No sources of funding to declare.



Figure -1

Figure -2

CONCLUSION:-

Despite viruses were reported as a triggering factor in oral lichen planus, the association between oral lichen planus and COVID-19 may have been coincidental. There are many systemic conditions may be associated with lesions of Oral Lichen Planus and at times oral manifestations play an important role in diagnosing underlying systemic diseases.

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