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RESEARCH ARTICLE

ORAL LICHENOID HYPERSENSITIVITY REACTION ON EXPOSURE TO TOBACCO PRODUCT: A RARE CASE REPORT

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ABSTRACT

The oral lichenoid lesion (OLL) is response that occurs on the oral mucosa. The OLL commonly include allergic response to the dental materials, drugs, and on graft-vs-host disease (GVHD). The prevalence of oral lichen planus is more with the female predilection. Oral lichenoid lesions develop as a type IV hypersensitivity reaction. Both of those entities are potential precancerous conditions; this adds to their clinical significance. Oral lichen planus and oral lichenoid reactions are two distinct diseases. They will be clinically similar but they need different etiologic factors. A histopathological study is critical to differentiate them. The definitive diagnosis of those conditions is extremely important given their potentially premalignant nature. A timely diagnosis probably results in proper management. The aim of this study was to present a rare etiological factor the tobacco product in the incidence of oral lichenoid hypersensitive reaction.

INTRODUCTION

Oral lichenoid reactions are considered as variants of oral lichen planus. It was first described by Dubreuill in 1906 and later by Shklar (1972). The buccal mucosa, dorsum of tongue and gingival are commonly affected. It has been related to some dental materials and numerous drugs too, although just some of those are confirmed. Drugs like beta blockers, oral hypoglycemic, Non-steroidal anti- inflammatory drugs (NSAIDs), dapsone, penicillamine, phenothiazines, sulphonylureas are related to lichenoid reactions (Ismail, 2007). Unlike OLP, it has an underlying identifiable cause and withdrawal of it allows rapid remission of the lesions. It is said to be a lymphocyte-mediated delayed hypersensitive allergy of any dental restorative material which causes irritation and local inflammation of the oral mucosa on continuous contact with them. Smoking is related to potentially malignant disorders of the oral and oropharyngeal mucosa, with risk increasing in a dose-dependent manner and declining with the duration of smoking cessation. However, little is known about the influence of cigarette smoke content on the course of oral lichen planus (OLP) and its potential of malignant transformation. Unlike OLP, which incorporates a single title, lichenoid reactions are listed with different terms in the review of articles based on various etiopathogeneses in step with the frequency of repetition, as follows: OLR (Oral Lichenoid Reaction), OLL (Oral Lichenoid Lesions) (Cobos-Fuentes, 2009; Issa, 2004; Dudhia, 2015), OLDR (Oral Lichenoid Drug Reaction), OLCR (Oral Lichenoid Contact Reaction) (Rice, 2002). OLTR (Oral Lichenoid Tissue Reaction), LDE (Lichenoid Drug Eruption) (Rice, 2002), OLLC (Oral Lichenoid Lesions Related to Contact) (Cobos-Fuentes, 2009), OLLD (Oral Lichenoid Lesions Related to Drug) (Cobos-Fuentes, 2009), Contact lichenoid stomatitis (Grossmann, 2015), Contact lesions, Contact allergy (Cobos-Fuentes, 2009), Lichenoid stomatitis (Hiremath, 2011), Stomatitis venenata(8), OLL-GVHD (Oral Lichenoid Lesions of Graft Versus Host Disease). It presents a clinical characteristic feature of white, wavy non elevated striae that do not criss-cross as in OLP. This reaction will occur in a small susceptible population group by accumulation of the causative agents in healthy and/or damaged oral mucosa leading to white patches in reticular fashion, plaques, papules, ulcerations, or erosions, similar to that found in OLP; hence, the term "lichenoid" given to this reaction. The frequency of malignant transformation is also found to be high in oral lichenoid lesions rather than OLP(9). Following is a case report of a 22 year old male patient describing a case of OLR associated with tobacco usage.

Case report

A 22 year old male patient presented with a complaint of superficial surface morphological variations bilaterally in the buccal mucosa with a grayish, non-scrappable lesion for past one month which was asymptomatic and aggravating on subjective observation associated with a history of multibrand smoking for one year. The oral hygiene of the patient was good.

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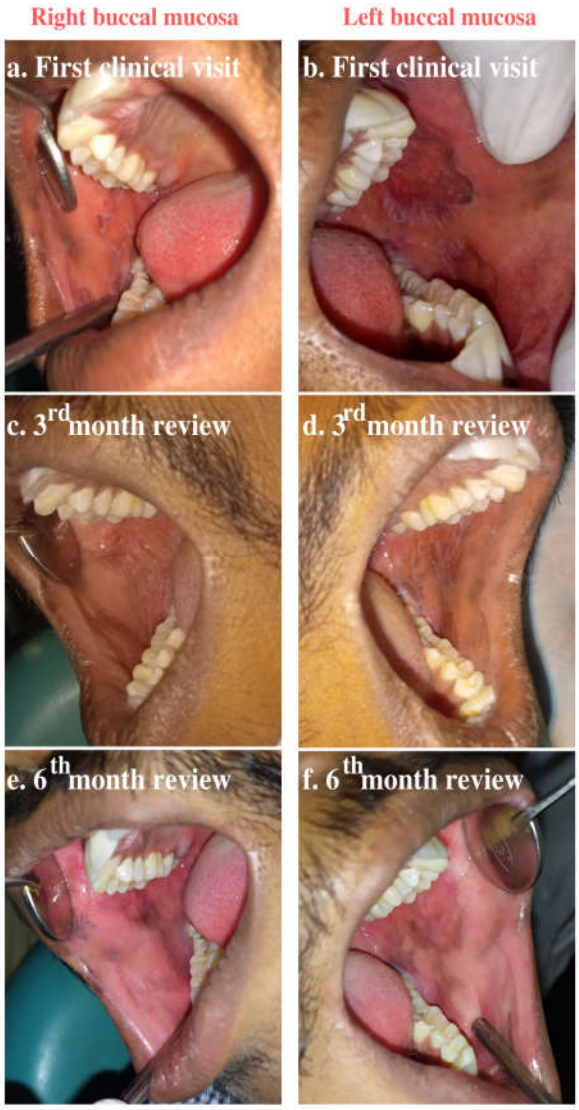

The lichenoid reaction should be diagnosed by clinical examination due to the need of a cause-effect relationship. This may be achieved by a careful and detailed anamnesis on the dietary habits, routine or occasional use of drugs, and oral hygiene. The provisional diagnosis of hypersensitivity to tobacco products was made of eliminating all other diagnosis of any other deficiency symptoms systematically too and a differential diagnosis of OLL and OLP was made. Initially on first visit image it doesn't defined to be of oral lichenoid like lesion, but on provisional diagnosis with empirical therapy on topical corticosteroids and systemic antioxidants like lycopene and cessation of tobacco usage, satisfactory healing occurred on subsequent follow up in 1 month during healing period lichen planus like striations are visible which suggestive of lichenoid contact stomatitis. Healing of the lesion was observed after administration of antioxidants and vitamin supplements with simultaneous termination of the habit of smoking. . The clinical manifestation did not initially resemble a lichenoid reaction. Re-evaluation after a recall of 4months showed that the lesion presented a characteristic greyish criss-crossed wavy striae during the event of healing. Two months after which complete remission of the lesion was noted (figure 1).

DISCUSSION

The present report supports growing evidence of multiple etiological factors regarding oral lichenoid reactions.

Daftary *et al* have reported an OLP like lesion in Indian betel-tobacco chewers during and epidemiologic study of oral cancer and pre-cancerous lesions of Indian population in Kerla, India(10). In a meta-analysis study of 57 studies (20,095 cases) showed that 1.1% of oral lichen planus patients developed oral squamous cell carcinoma, while the rate of malignant transformation among oral lichenoid lesions cases was 2.5% (Aghbari *et al*., 2017). The pathogenesis of lichenoid drug eruptions appear to involve different routes of antigen presentation. However the precise mechanism continues to be unknown. Patch test in subjects with lichenoid eruptions appear to indicate that the majority are in fact allergic to the substance. However, due to its inconsistent findings it is difficult to determine whether the disease may well be classified as an hypersensitive reaction or not. This may not be a suitable approach for oral lichenoid reactions. Oral lichenoid reaction being the pathology with the higher degree of misdiagnosis in clinical practice and management as this lesion doesn't have a outlined exact clinical pattern of occurence, this lesion needs to be addressed effectively with the proper knowledge on diagnosis to avoid mistreatment for the patients. In most cases, the cause for OLR can't be identified, hence the diagnosis by exclusion is "idiopathic OLP". This case report throws light on a differential clinical expression of oral lichenoid reaction which is of great clinical importance for efficient practice.

Conclusion

Attention should be focused towards the difficulty in establishing the differential diagnosis by clinicians unaware of the two diseases or who don't follow their patients for the period required for their differentiation furthermore as if the microscopic diagnosis of lichenoid reaction might not be reached due to lack of indication of a cause-effect relationship. The oral lichenoid reaction being considered in literature as a precancerous lesion which encompasses a more chances for transformation than Oral lichen planus, this needs a proper intervention at a specified time period to avoid further consequences.

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