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Clinical Profile of Patients Presenting with Oral Lichen Planus in A Tertiary Care Teaching Hospital

Medical Science

KEYWORDS : Oral, Llichen planus, Buccal

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ABSTRACT

Oral lichen planus is an inflammatory condition involving the oral mucosa, presenting with varied lesions ranging from painless white keratotic lesions to painful erosions and ulcerations. Moreover, remissions and exacerbations are common features of the disease. The present study aimed at surveillance of the clinical and demographic profile of patients presenting with oral lichen planus. In the present study, females from 30 to 50 years of age were commonly affected with OLP. Reticular type of OLP on buccal mucosa was the most frequently encountered type of lesion. Diabetes mellitus was the most common systemic disease associated with OLP. Long-term follow-up is essential to detect symptomatic flare up and malignant transformation.

INTRODUCTION

Oral lichen planus (OLP), a chronic inflammatory condition of oral mucosa of auto-immune origin, was first described by Erasmus Wilson in 1866 [1]. It is more commonly encountered in females than males (1.4:1). Moreover, it is frequently seen in patients of 30-60 years of age group, where as children are rarely affected by OLP [2]. Usual clinical presentations of OLP are bilateral lesions, with combinations of subtypes such as, reticular, papular, plaque, atrophic, bullous and erosive. OLP lesions can have diverse presentations like, white or grey streaks with a linear or reticular pattern and an erythematous background or a central area of shallow ulceration with a yellowish surface due to fibrinous exudate surrounded by an erythematous area. Buccal mucosa, tongue, soft palate, gingiva and lips are the common sites to be involved in OLP [3]. OLP is associated with varieties of etiological factors such as genetic predisposition, viral infections with HPV, HHV-6, EBV and HCV, and Helicobacter pylori infection. Contributory factors such as, usage of dentures, medications with NSAIDS, beta blockers, ACE inhibitors, sulphonylureas and some antimalarials are also implicated in OLP. Autoimmune diseases like primary biliary cirrhosis, chronic active hepatitis, ulcerative colitis, thymoma and myasthenia gravis are found to be associated with OLP [4]. In OLP, apoptosis of the basal keratinocytes of the oral mucosa is triggered by autoimmunity, mediated by CD8+ T cells. Moreover, endothelial cells of the sub-epithelial vascular plexus have increased expression of the vascular adhesion molecules (VAM) such as, CD62E, CD54 and CD106 with reciprocal expression of receptors (CD11a) to these VAM in the infiltrating lymphocytes. Cytokines (TNF-α, IFN-γ and IL-1) also play a role in the up-regulation of the VAM [5]. Basement membrane (BM) disruption along with keratinocyte apoptosis are aggravated by mast cell degranulation and MMP-1 activation [6]. The remission and exacerbation of symptoms in OLP are attributed to the chronic nature of the condition. The diagnosis of OLP depends on the presence of characteristic oral and dermal lesions. Biopsy is performed to confirm the diagnosis and to rule out dysplasia and malignancy [7]. Liquefactive degeneration of the basal cell with apoptosis of the keratinocytes, a dense band-like lymphocytic infiltrate at the interface between the epithelium and the connective tissue, focal areas of hyperkeratinized epithelium (Wickham's striae) and occasional areas of atrophic epithelium where the rete pegs may be shortened and pointed (Saw tooth rete pegs) are the characteristic histopathological features of OLP. Degenerating keratinocytes, evident by eosinophilic colloid bodies (Civatte bodies) are commonly encountered in the lower part of the surface epithelium. The epithelial connective tissue interface is weakened by the degeneration of the basal keratinocytes and disruption of the anchoring elements of the epithelial BM and basal keratinocytes. This may result in histologic clefts (Max-Joseph spaces) and blisters on the oral mucosa (Bullous lichen planus) [8].

MATERIAL AND METHODS

100 patients, who were above 14 years of age, visiting the departments of Dermatology and Ear, nose and throat from March 2015 to February 2016 and diagnosed to be cases of oral lichen planus, were included in the present study. The clinical diagnostic criteria proposed by van der Meij *et al* in 2003 based on the WHO definition of OLP, as well as histopathological features were taken into account to identify the cases of OLP. The inclusion criteria were, the presence of bilateral lesions, lacy network of slightly raised white lines (reticular pattern), erosive, atrophic, bullous and plaque type of lesions. Hypergranulosis, parakeratosis, acanthosis, liquefied degeneration of cells within the basal layer, presence of lymphohistiocytic infiltrate in a band-like pattern at the level of papillary dermis and absence of epithelial dysplasia, were the criteria for histopathological diagnosis of OLP. The study also comprised of a detailed history regarding age, sex, symptoms, sites of oral involvement and the predominant clinical type at the initial diagnosis of OLP. History of alcohol intake, smoking, tobacco, gutkha chewing, systemic diseases and family history of OLP and oral malignancies were also taken into consideration. The predominant clinical form was used to classify the lesions in patients with multiple types of oral lesions.

RESULTS

Among 100 patients of OLP, 61 were females and 39 were males with a male to female ratio of 1:1.56. OLP was commonly encountered in the age group between 31 to 50 years, the incidence being lower below 20 years and above 60 years of age (Table 1). Reticular type of OLP (Figure 1) was the most common type of presentation seen in 63 cases, followed by erosive type with 17 and atrophic type with 12 cases (Table 2). Buccal mucosa was the most frequent site to be involved, in 79 cases (Table 3). Diabetes mellitus was seen as the most common associated co-morbidity in 34 cases followed by Lichen planus in 24 cases (Table 4). One patient had atypical presentation, which was confirmed to be epithelial dysplasia on histopathological study. In majority of patients, personal habit of tobacco chewing was encountered.

Figure 1: Reticular type of Oral lichen planus

Table 1: Age and sex distribution of OLP

Age in years	Male	Female	Total	Percentage
< 20 years	01	02	03	3%
21 – 30	07	08	15	15%
31 – 40	10	19	29	29%
41 – 50	12	17	29	29%
51 – 60	06	11	17	17%
> 60 years	03	04	07	7%
Total	39	61	100	100%

Table 2: Clinical types of lesions in cases of OLP

Lesions type	Male	Female	Total	Percentage
Reticular	27	36	63	63%
Erosive	06	11	17	17%
Atrophic	04	08	12	12%
Papular	01	04	05	5%
Bullous	01	02	03	3%
Total	39	61	100	100%

Table 3: Site and type of lesions of OLP

Site	Reticular	Erosive	Atrophic	Papular	Bullous	Total
Buccal mucosa	54	15	05	03	02	79
Tongue mucosa	04	01	01	02	00	08
Palate	02	01	02	00	01	06
Gingiva	01	00	03	00	00	04
Lip mucosa	02	00	01	00	00	03
Total	63	17	12	05	03	100

Table 4: OLP cases associated with systemic diseases

Gender	Diabetes	Lichen planus	Hypertension	Atopic dermatitis	Others
Male	15	09	07	03	02
Female	19	15	10	06	03
Total	34	24	17	09	05
Percentage	34%	24%	17%	9%	5%

DISCUSSION

The present study revealed that, females had a higher incidence than males with a male to female ratio of 1:1.56, which was similar to the findings of other studies [9, 10, 11]. But as per a study (Munde et al, 2013), males had higher incidence than females [12]. In the present study OLP was more commonly seen in the 3rd to 5th decade of life. As per studies, OLP had less common occurrence in children and was more frequently seen in 30 to 60 years of age [13]. As per the present study, 79% cases had involvement of buccal mucosa, which was in consistence with the results of other studies [14]. The lesions were mostly bilaterally symmetrical and asymptomatic, where as in small number of patients especially with erosive and bullous type of lesions, pain was an accompanying complaint. As reported in studies, some patients with non-erosive or non-ulcerative OLP still complained of oral discomfort [9, 15]. In the present study, reticular type of clinical presentation was the most common finding, in 63% of cases with typical lacy pattern and presence of Wickham's striae, which is similar to the results of other studies [12, 16]. Among the patients of OLP, associated diseases such as diabetes mellitus was seen in 34% of cases followed by lichen planus on skin in 24%, hypertension in 17% and atopic dermatitis in 9% of patients. Similar results were encountered in a study, where diabetes mellitus was seen in 27.4% of patients [17]. However a study (Ahmed et al) revealed OLP to be associated in 6.9% of patients with diabetes mellitus [18].

CONCLUSION

The diversity of clinical presentations in Oral lichen planus as well as the chronic nature of the disease necessitates a thorough and detailed clinico-histopathological assessment of the patients in order to formulate an effective management protocol. A long term follow up of the patients helps in diagnosing and treating clinical flare ups as well as malignant transformations of the condition.

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