

Sociodemographic and clinical profile of 49 patients with oral lichen planus: a 10-year retrospective study

Perfil sociodemográfico e clínico de 49 pacientes com líquen plano oral: um estudo retrospectivo de dez anos

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Abstract

Considering a few epidemiologic studies which describes clinic and pathologic features and prevalence of oral lichen planus (OLP) in Brazil as well as the importance of such studies in order of health care services plans and to verify changes along the years, the present study aimed to evaluate the sociodemographic and clinical profile of 49 participants diagnosed with OLP during a period of ten years. For the sample selection, the clinical and histopathological criteria for the diagnosis of OLP proposed by the American Academy of Oral and Maxillofacial Pathology were used, except for the criterion “absence of epithelial dysplasia”. Most individuals were female (75.5%; $p = 0.0005$). White individuals were significantly older than the black individuals (67.7 vs 49.2 years; $p = 0.001$). Lesions affecting multiple bilateral/symmetric sites were more common than lesions in a single bilateral/symmetric site (77.6%; $p = 0.0001$). The most commonly affected sites were buccal mucosa (85.7%), tongue (65.3%), gingiva (42.9%), and lips (32.7%). Most lesions were white (reticular pattern was found in 93.9% and plaque in 75.5% of cases). Plaque pattern was more common in older individuals ($p = 0.006$). During the different moments of evaluations some individuals did not meet the American Academy of Oral and Maxillofacial Pathology criteria due to the absence of oral lesions with multifocal symmetric distribution. Therefore, in a first consultation, if the patient does not present multifocal symmetric distributed lesions, the diagnosis of OLP cannot be excluded and the patient should be followed-up.

Keywords: Lichen planus; Oral lichen planus; Epidemiology; Classification; Skin disease; Chronic disease.

Resumo

Considerando os poucos estudos epidemiológicos que descrevem as características clínicas, patológicas e a prevalência do líquen plano oral (LPO) no Brasil, bem como pela importância desses estudos para planejamento dos serviços de saúde e verificação de alterações ao longo dos anos, o presente estudo teve como objetivo avaliar o perfil sociodemográfico e clínico de 49 participantes com diagnóstico de LPO durante um período de dez anos. Para a seleção da amostra foram utilizados os critérios clínicos e histopatológicos para o diagnóstico de LPO propostos pela Academia Americana de Patologia Oral e Maxilofacial, exceto o critério “ausência de displasia epitelial”. A maioria dos indivíduos era do sexo feminino (75,5%; $p = 0,0005$). Indivíduos brancos eram significativamente mais velhos que os negros (67,7 x 49,2 anos; $p = 0,001$). Lesões que acometem múltiplos sítios bilaterais/simétricos foram mais comuns do que lesões em um único sítio bilateral/simétrico (77,6%; $p = 0,0001$). Os locais mais acometidos foram mucosa jugal (85,7%), língua (65,3%), gengiva (42,9%) e lábios (32,7%). A maioria das lesões era branca (padrão reticular foi encontrado em 93,9% e placa em 75,5% dos casos). O padrão placa foi mais comum em indivíduos mais velhos ($p = 0,006$). Durante os diferentes períodos das avaliações, alguns indivíduos não atenderam aos critérios da Academia Americana de Patologia Oral e Maxilofacial devido à ausência de lesões orais com distribuição simétrica multifocal. Portanto, em uma primeira consulta, se o paciente não apresentar lesões com essas características, o diagnóstico de LPO não pode ser excluído e o paciente deve ser acompanhado.

Palavras-chave: Líquen plano; Líquen plano oral; Epidemiologia; Classificação; Doenças de pele; Doenças crônicas.

Resumen

Considerando los pocos estudios epidemiológicos que describen las características clínico-patológicas y la prevalencia del líquen plano oral (LPO) en Brasil, así como la importancia de estos estudios para la planificación de los servicios de salud y la verificación de los cambios a lo largo de los años, el presente estudio tuvo como objetivo de evaluar el perfil sociodemográfico y clínico de 49 participantes diagnosticados de LPO durante un período de diez años. Para la selección de la muestra se utilizaron los criterios clínicos e histopatológicos para el diagnóstico de LPO propuestos por la Academia Americana de Patología Oral y Maxilofacial, excepto el criterio “ausencia de displasia epitelial”. La mayoría de los individuos eran mujeres (75,5%; $p = 0,0005$). Los sujetos blancos eran significativamente mayores que los negros (67,7 frente a 49,2 años; $p = 0,001$). Las lesiones que afectan múltiples sitios bilaterales/simétricos fueron más comunes que las lesiones en un único sitio bilateral/simétrico (77,6%; $p=0,0001$). Los sitios más afectados fueron mucosa bucal (85,7%), lengua (65,3%), encía (42,9%) y labios (32,7%). La mayoría de las lesiones eran blancas (se encontró patrón reticular en el 93,9% y placa en el 75,5% de los casos). El patrón de placa fue más común en sujetos mayores ($p = 0,006$). Durante los diferentes momentos de las evaluaciones, algunos individuos no cumplieron con los criterios de la Academia Americana de Patología Oral y Maxilofacial debido a la ausencia de lesiones orales con distribución simétrica multifocal. Por tanto, en una primera consulta, si el paciente no presenta lesiones de estas características, no se puede descartar el diagnóstico de LPO y se debe realizar un seguimiento del paciente.

Palabras clave: Líquen plano; Líquen plano oral; Epidemiología; Clasificación; Enfermedades de la piel; Enfermedades crónicas.

1. Introduction

Lichen planus (LP) is a chronic inflammatory disorder of the skin and mucous membranes, and its pathogenesis is still poorly understood (Cheng et al., 2016). Several factors have been proposed for its development, including local and systemic inducers of cell-mediated hypersensitivity, emotional stress, autoimmune response to epithelial antigens, and microorganisms (Cheng et al., 2016).

According to the American Academy of Oral and Maxillofacial Pathology (AAOMP) (2016), clinical characteristics of OLP include white and red lesions with multifocal bilateral symmetric distribution and exhibiting one or more the following patterns reticular/papular, atrophic (erythematous), erosive (ulcerative), plaque, and bullous; lesions not exclusively located on sites of smokeless tobacco placement and adjacent to and in contact with dental restorations; and lesions which onset does not correlate with the start of medication use and cinnamon-containing products.

The diagnosis of OLP is established through a clinical-pathological correlation (Parashar, 2011). The histopathological criteria include band-like or patchy, predominately lymphocytic infiltrate in the lamina propria confined to epithelium-connective tissue interface, basal cell liquefactive degeneration, lymphocytic exocytosis, absence of epithelial dysplasia, and absence of verrucous epithelial architecture (Cheng et al., 2016).

Considering a few epidemiologic studies which describes clinic and pathologic features and prevalence of OLP in Brazil as well as the importance of such studies in order of health care services plans and to verify changes along the years, the present study aimed to evaluate the sociodemographic and clinical profile of 49 participants diagnosed with OLP during a period of ten years.

2. Methodology

This is a descriptive, cross-sectional and retrospective epidemiological study (Pereira et al., 2018), approved by the Research Ethics Committee of Hospital Universitário Antônio Pedro of the Universidade Federal Fluminense (#3.583.142), and was carried out in accordance with Declaration of Helsinki.

The sample consisted of 49 individuals diagnosed with OLP, between 2009 and 2019. The participants were identified by searching the electronic medical record system used in the Oral Diagnosis Clinic of the Antônio Pedro University Hospital. For the search, the following terms were used: lichen planus, oral lichen planus, lichenoid lesion, lichenoid reaction, and lichenoid mucositis. This search with different terms is justified by the fact that different classification criteria and nomenclatures have been attributed to these lesions over the years.

Figure 1 - Clinical and histopathological criteria for the sample.

Clinical criteria	Histopathologic criteria
Multifocal symmetric distribution; White and red lesions exhibiting one or more of the following forms: - Reticular/papular; - Atrophic (erythematous); - Erosive (ulcerative); - Plaque; - Bullous. Lesions are not localized exclusively to the sites of smokeless tobacco placement; Lesions are not localized exclusively adjacent to and in contact with dental restorations; Lesion onset does not correlate with the start of a medication; Lesion onset does not correlate with the use of cinnamon-containing products	Band-like or patchy, predominately lymphocytic infiltrate in the lamina propria confined to the epithelium-lamina propria interface Basal cell liquefactive (hydropic) degeneration Lymphocytic exocytosis Absence of verrucous epithelial architectural change

Source: Modified from the American Academy of Oral and Maxillofacial Pathology (2016) criteria.

Clinical photographs saved in the electronic medical record system of all cases were independently evaluated by two stomatologists (ASJ and LCM) and one oral pathologist with experience in stomatology (DCC). Discordances were resolved by consensus. The histological glass slides stained with Hematoxylin and Eosin (HE) were reevaluated by one experienced oral pathologist (DCC), and one stomatologist with experience in oral pathology (LCM). For the selection of the sample, the clinical and histopathological criteria for the diagnosis of OLP proposed by the AAOMP (2016) were used, except for the

criterion “absence of epithelial dysplasia” (Figure 1). This criterion was excluded based on the controversy if OLP may or may not be considered a potentially malignant disorder. The exclusion criteria were insufficient data in the medical records, poor quality photographs, and absence of histological glass slides and paraffin blocks.

The following sociodemographic and clinical data were collected from the medical records, pathology request forms, and clinical photographs: sex, race, age, habits (smoking and drinking), presence of systemic disorders, presence of extraoral lesions of LP, presence and type of symptom, lesion pattern (Figure 2), number of patterns, affected anatomical sites, and distribution of lesions (lesion in only single bilateral/symmetric site or multiple bilateral/symmetric sites, Figure 3). For the classification of the clinical patterns, reticular pattern was considered in the presence of fine lacelike network of white lines; plaque pattern was considered in the presence of homogeneous white plaques; atrophic pattern was considered in the presence of erythematous areas; erosive/ulcerative pattern was considered in the presence of both erosive and ulcerative lesions covered by whitish yellow pseudomembrane.

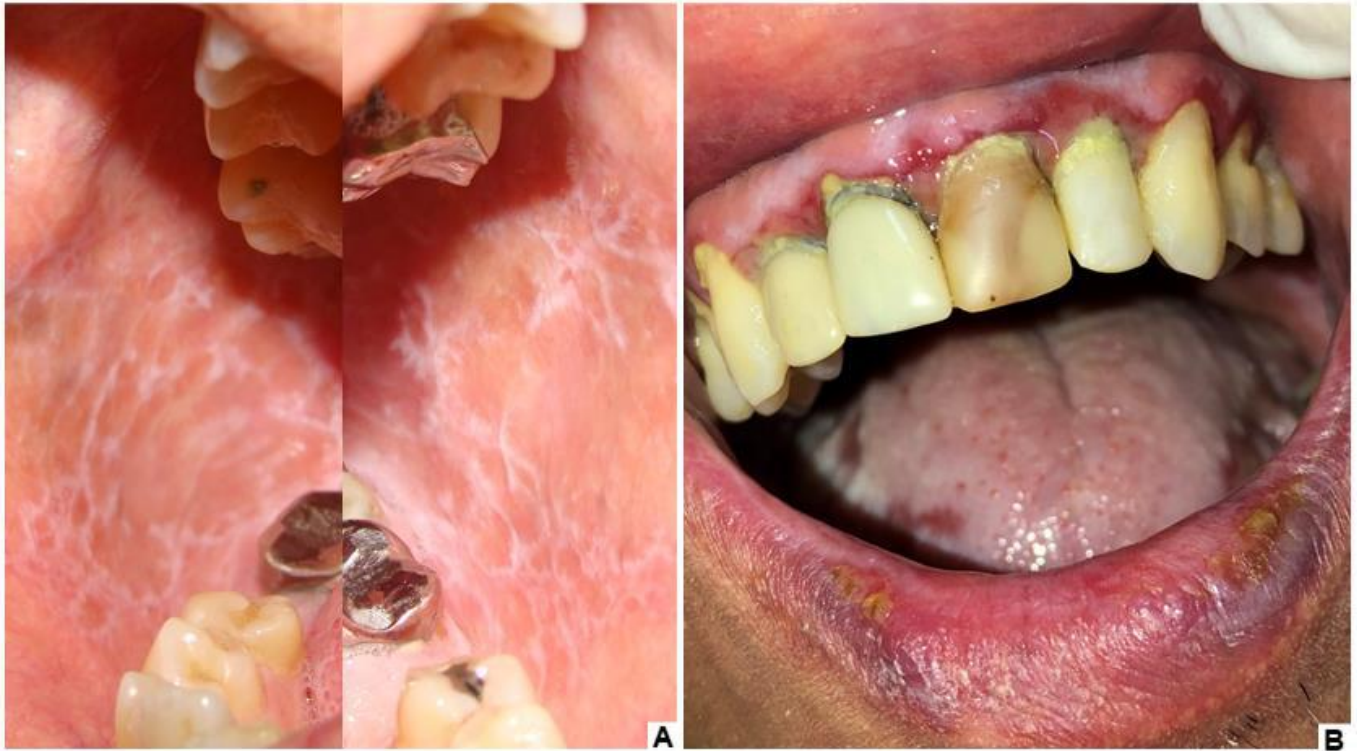
Figure 2 - Clinical patterns observed in the sample. Reticular (A). Atrophic (B). Erosive/Ulcerative (C). Plaque (D).



Source: Authors.

Statistical Package for the Social Sciences software (SPSS - version 23.0) was used for statistical analysis. The statistical description of the studied variables was shown as proportions and means, standard deviations, median and minimum-maximum values (when the variables were numerical). Shapiro-Wilk test, Student's t, Fisher's exact test, and exact binomial test were used for the comparison of the variables. The level of significance was 5%.

Figure 2 - Classification of the lesions according to their distribution. Lesion in only single bilateral/symmetric site (A). Lesions with multiple bilateral/symmetric sites (B).



Source: Authors.

3. Results

Out of the 125 cases registered in our records with the clinical and histopathological diagnosis of OLP, lichenoid lesion, lichenoid reaction, and lichenoid mucositis, 58 (46.4%) were excluded based on insufficient data for evaluation, and 18 (18.4%) did not have the diagnosis of OLP based on the criteria used in this study. A total of 49 individuals diagnosed with OLP were included. Considering the 49 participants, in 44 (89.8%) the OLP diagnosis was confirmed, in four (8.2%) the initial diagnosis of lichenoid reaction was changed for OLP, and in one (2.0%) case, the previous diagnosis of lichenoid lesion was changed for OLP.

The follow-up time of the individuals varied, as follows: 23 individuals were followed-up for less than 24 months, eight for 25 to 48 months, six for 49 to 72 months, six for 73 to 96 months, and two were followed-up for 97 to 120 months. The median of appointments was 17, ranging from one to 85 appointments. Only four individuals did not return for follow-up, and therefore had just one appointment registered.

The sociodemographic and clinical characteristics are shown in Table 1. Most individuals were female (75.5%; Exact binomial test, $p = 0.0005$) and the mean age was 58.3 years. Men and women did not differ in terms of age (Student's t test, $p = 0.379$). There was a statistically significant difference between the ages of the groups in relation to race (Student's t test: $t = 3.714$; $g.l. = 47$; $p = 0.001$). White individuals were significantly older than black individuals (67.7 vs 49.2 years; $p = 0.001$). Most participants were white (67.3%), non-smokers (57.1%), and non-alcohol users (59.2%).

Table 1 - Sociodemographic characteristics of patients with OLP.

Characteristics	Female (n=37; 75.5%)		Male (n=12; 24.5%)		Total (n=49)	
Age (years)						
Mean (s.d.)	59.3	(±13.37)	55.3	(±13.65)	58.3	(±13.41)
≤ 30	0	0.0%	1	8.3%	1	2.0%
30 to 60	15	40.5%	7	58.3%	22	44.9%
≥ 60	22	59.5%	4	33.3%	26	53.1%
Skin color						
White	25	67.6%	8	66.7%	33	67.3%
Black	12	32.4%	4	33.3%	16	32.7%
Extraoral lesions	12	32.4%	4	33.3%	16	32.7%
Smokers	9	24.3%	10	83.3%	19	38.8%
Drinkers	8	21.6%	9	75.0%	17	34.7%
Smokers and drinkers	3	8.1%	8	66.7%	11	22.4%
Systemic disorders	29	78.4%	10	83.3%	39	79.6%
Cardiovascular diseases	15	30.6%	6	12.2%	21	42.9%
Gastrointestinal diseases	14	28.6%	5	10.2%	19	38.8%
Psychiatric disorders	10	20.4%	1	2.0%	11	22.4%
Infectious diseases	6	12.2%	4	8.2%	10	20.4%
Hipothyroidism	5	10.2%	0	0.0%	5	10.2%
Diabetes mellitus	4	8.2%	0	0.0%	4	8.2%
Dyslipidemia	3	6.1%	0	0.0%	3	6.1%
Autoimmune disease	1	2.0%	1	2.0%	2	4.1%
Neurological disease	0	0.0%	2	4.1%	2	4.1%

Note: One participant did not present data on smoking and two participants did not present data on alcoholism. There was no access to one patient's history of past pathologies. Celiac disease was considered in the group of gastrointestinal diseases and autoimmune diseases. Source: Authors.

Systemic diseases were present in 79.6% of the participants. Among them, cardiovascular diseases (42.9% / n = 21), gastrointestinal diseases (38.8% / n = 19), psychiatric diseases (22.4% / n = 11), and infectious diseases (20.4% / n = 10) were the most common. Among the cardiovascular diseases, systemic arterial hypertension was present in 36.7% (n = 18) of the individuals. Considering the infectious diseases, 10.2% (n = 5) of the participants had hepatitis C (HCV); among the autoimmune diseases, one (2%) individual had celiac disease and one (2%) had psoriasis.

Multiple sites of involvement were found in 77.6% (n = 38) of the cases. Lesions affecting multiple bilateral/symmetric sites were more common than lesions in a single bilateral/symmetric site (binominal test, p = 0.0001). The chance of a person with OLP having lesions with multiple bilateral/symmetric sites was 3.6 times higher than having only single bilateral/symmetric site. The most affected sites were buccal mucosa (85.7% / n = 42), tongue (65.3% / n = 32), gingiva (42.9% / n = 21), and lips (32.7% / n = 16) (Table 2).

Table 2 - Clinical characteristics of patients with OLP.

Charateristics	Female (n=37; 75.5%)		Male (n=12; 24.5%)		Total (n=49)	
Distribution of lesions						
Single bilateral/symmetric	8	21.6%	3	25.0%	11	22.4%
Multiple bilateral/symmetric	29	78.4%	9	75.0%	38	77.6%
Anatomical sites						
Buccal mucosa	32	86.5%	10	83.3%	42	85.7%
Tongue	26	70.3%	6	50.0%	32	65.3%
Gingiva	17	45.9%	4	33.3%	21	42.9%
Lip	11	29.7%	5	41.7%	16	32.7%
Palate	6	16.2%	3	25.0%	9	18.4%
Labial mucosa	4	10.8%	1	8.3%	5	10.2%
Vestibule	2	5.4%	1	8.3%	3	6.1%
Floor of the mouth	1	2.7%	0	0.0%	1	2.0%
Lesion pattern						
Reticular	35	94.6%	11	91.7%	46	93.9%
Plaque	27	28.7%	10	83.3%	37	75.5%
Atrophic	27	28.7%	8	66.7%	35	71.4%
Erosive/Ulcerative	5	5.3%	4	33.3%	9	18.4%
Symptoms						
Asymptomatic	18	48.6%	8	66.7%	26	53.1%
Burning sensation	18	48.6%	4	33.3%	22	44.9%
Pain	8	21.6%	2	16.7%	10	20.4%

Note: Multiple clinical appearance, multiple anatomical locations, and multiple symptoms could be observed in the same patient.
Source: Authors.

Most participants had more than one clinical pattern (87.8% / n = 43), and 61.2% (n = 30) had three or four patterns concomitantly. Most lesions were white, with a reticular pattern in 93.9% of cases (n = 46), and plaque in 75.5% (n = 37). Only three participants did not have the reticular pattern (6.1%). Red lesions with an atrophic (71.4% / n = 35) and erosive/ulcerative (18.4% / n = 9) patterns were less common. The bullous pattern was not found in our sample. The reticular pattern was present in all buccal mucosa lesions. Reticular and atrophic patterns were more frequent on the gingiva (66.7% / n = 14; 66.7% / n = 14, respectively). Tongue lesions usually had plaque and reticular patterns (71.9% / n = 23; 68.8% / n = 22, respectively). There was a strong association between the reticular pattern and buccal mucosa (p=0.002); between plaque and atrophic patterns and buccal mucosa (p=0.001 and p<0.001, respectively), tongue (p<0.001) and p=0.003, respectively), and gingiva (p=0.029 and p=0.003, respectively); and between the erosive pattern and buccal mucosa (p<0.001), tongue (0.005), and lips (p=0.005).

There was also a moderate association between elderly participants (above 60 years old) and the presence of the plaque pattern (bilateral Fisher's exact test, p = 0.006; Phi coefficient: ϕ = 0.415).

There was no association between smoking habit and clinical patterns of OLP (Fisher's exact test, p>0.05: reticular 0.554; atrophic 0.741; erosive/ulcerative 1.000; plaque 0.161), as well as the association of participant's gender with clinical patterns of the disease (Fisher's exact test, p>0.05: reticular 1.000; atrophic 0.721; erosive/ulcerative 0.195; plaque 0.703).

Almost half (46.9% / n = 23) of the participants were symptomatic, with complaints of burning (44.9% / n = 22) and pain (20.4% / n = 10). The participants with simultaneous manifestations of erosive/ulcerative pattern with other patterns were more symptomatic (77,8%/n=7). We did not observe individuals with only erosive/ulcerative pattern. All the participants with

only reticular pattern were asymptomatic. Considering the individuals with only plaque pattern one had burning complaint and the other was asymptomatic.

4. Discussion

Although the first description of LP was made more than 150 years ago, and many efforts and investments in basic, histopathological, and clinical research have been performed, its etiology, pathogenesis, and potential for malignancy are still not clear (Cheng et al., 2016). The diagnostic criteria for OLP proposed by the AAOMP (2016) is widely accepted, but, there is no agreement about it. The AAOMP (2016) includes the absence of epithelial dysplasia in its criteria for the diagnosis of OLP, although, the World Health Organization (WHO) (2020) considers it to be a potentially malignant disorder. The percentage of malignant transformation varies between studies from 0% to 12.5% (Idrees et al., 2021), and patients with OLP are 4.8 times more likely to develop squamous cell carcinomas (Wei et al., 2018). Due to this controversy, our work did not use the criterion "absence of dysplasia" of AAOMP.

In the present study, OLP was more prevalent in white individuals in the 5th decade of life and affected women and men in a 3:1 ratio. This profile is similar to that found in previous studies in Brazil (de Lima et al., 2019; Oliveira Alves et al., 2010), as well as in Europe, Asia, and Oceania (Cassol-Spanemberg et al., 2019; Kaomongkolgit et al., 2019). However, in our study, when the disease affected black individuals, the age group was younger, which corroborates the findings of Diop et al. (2020), who verified an average of 38 years in black individuals in a study on the African continent.

There is no data in the literature indicating that smoking and alcohol habits are associated with OLP (Radochová et al., 2014), which is similar in our study. Only 38.8% of the participants were smokers and 34.7% were alcohol users. Although studies have shown that there is no association between smoking and alcohol habits with OLP (González-Moles et al., 2020; Oliveira Alves et al., 2010), there is evidence in the literature that these habits increase the risk for malignant transformation in patients with OLP (González-Moles et al., 2019). Thus, individuals should be monitored and encouraged to discontinue these habits.

Several systemic disorders were reported in association with OLP. We observed that the frequency of history of systemic diseases was 79.6%, which is similar to the results of the study performed by Kaomongkolgit et al. (2019), who demonstrated that 76.5% of the participants had some systemic disease or were in use of medications. Considering the total of systemic diseases, arterial hypertension represented 36.7% of the cases, which was lower than the percentage of 48.5% found in the study by Radochová et al. (2014). However, the prevalence of arterial hypertension found in our study was higher than its prevalence in the general population in Brazil, which is 24.7% (Ministério da Saúde, 2019). This higher prevalence does not seem to suggest a direct relationship with the pathogenesis of OLP, but rather a likely coincidence in the predilection for an age group in both diseases (McCreary & Ríordáin, 2010). Furthermore, psychiatric disorders, such as anxiety/depression (22.4%), hypothyroidism (10.2%), and diabetes (8.2%) were not higher than expected for the Brazilian population.

Regarding HCV (10.2%), a value higher than the expected prevalence in Brazil was found, which is 1.38% (Beloqui, 2017). Of the several potential exogenous antigens for the development of LP, HCV has been the most studied. Epidemiological studies have shown that there is an association between LP and HCV in certain geographic regions (East and Southeast Asia, South America, Middle East, and Europe), but not in others (North America, South Asia, and Africa) (Shengyuan et al., 2009). The discrepant results may be due to a variety of factors, including the individual's genetic factors and virus genotypes (Manomaivat et al., 2018).

The involvement of the skin, nails or genital mucosa concomitantly with the oral lesions of LP was present in 32.7% of the participants in the present sample, similar to the results of Oliveira Alves et al. (2010). However, other studies have demonstrated that extraoral involvement occurs in less than 22% of the cases (Kaomongkolgit et al., 2019; Radochová et al.,

2014; Rimkevičius et al., 2017). Despite this data, it is important that all individuals with OLP are investigated for the presence of extraoral lesions. Similarly, those diagnosed with extraoral lesions of LP should be evaluated for the presence of oral lesions. The higher prevalence of extraoral lesions of LP found in our sample when compared to other studies may be related to the fact that the referral to the dermatologist is mandatory in our clinic, even in the absence of a patient complaint and lesions detected during the general clinical examination.

We found that 77.6% of the participants had multiple sites of involvement. The most affected sites were buccal mucosa (85.7%), tongue (65.3%), gingiva (42.9%), and lips (32.7%), which are in accordance with the literature (Cassol-Spanemberg et al., 2019; Oliveira Alves et al., 2010; Radochová et al., 2014).

Although OLP is an incurable disease, it presents periods of exacerbation and remission. In our study, most participants (87.8%) had combined clinical forms of OLP, similar to the study by Kaomongkolgit et al. (2019), who evaluated OLP lesions over 16 years and found the combination of multiple patterns in 91.2% of cases. OLP has a dynamic behavior and, depending on the moment when the patient is evaluated, changes and combinations in the patterns are expected in the same individual over time. These results reinforce that a periodic follow-up of the patient is important. During the different evaluation times of the study participants, sometimes, based on the clinical features, did not meet the AAOMP (2016) criteria due to the absence of oral lesions with multifocal symmetric distribution. Therefore, in a first consultation, if the patient does not present multifocal symmetric distributed lesions, the diagnosis of OLP cannot be excluded and the patient should be followed-up.

Most participants in our research had white lesions (reticular and plaque), similar to the study by Torrente-Castells et al. (2010), who found these lesions in 66% of the total sample. However, red lesions (erosive/ulcerative and atrophic) were more frequent in some studies (Boñar-Alvarez et al., 2019; Gümrü, 2013) and the reticular and atrophic patterns in others (Cascone et al., 2017; Cassol-Spanemberg et al., 2019). The explanation of some authors for the higher prevalence of red lesions in relation to white ones is that white lesions are usually asymptomatic, which makes them more difficult to be identified by the patient and implies less demand for the diagnosis and underreporting of such patterns (Torrente-Castells et al., 2010). It is worth mentioning that, as there is no consensus on the diagnostic criteria for OLP, studies may use different methodologies, which would imply different prevalence of the lesions. In the present study, we believe that it was observed more white lesions, which were asymptomatic and unaware by the patients, because in the Oral Diagnosis Clinic, the entire oral mucosa is carefully examined and all patients are on long period follow-up. Some studies found the bullous pattern less frequently (12.5%) (Rimkevičius et al., 2017; Thorn et al., 1988). We identified no participants with this clinical pattern.

Only three participants in our sample did not present the reticular pattern. Although, in the past, the presence of the reticular lesions was used as a diagnostic criterion for OLP (Van der Meij & Van der Waal, 2003), AAOMP (2016) removed this characteristic from its criteria. Recently, in 2020, the study by González-Moles et al. (2020) proposed changes in the diagnostic criteria of OLP, with the inclusion of this pattern in some areas of the oral mucosa. In the same year, Warnakulasuriya et al. (2020), in a workshop held by the WHO Collaborating Centre for Oral Cancer in the UK, maintained the presence of this criterion in its clinical classification. The fact that we did not find the reticular pattern in three participants does not mean that this pattern was not present at any time. Moreover, over the time, papular and reticular lesions may suffer confluence leading to the appearance of plaque (Cheng et al., 2016). This fact may explain why we found a greater proportion of the plaque pattern in participants over 60 years of age. However, differently, Thorn et al. (1988) found a higher frequency of atrophic lesions in people of the same age group.

The symptoms of OLP can last for several weeks or months and can vary from a slight sensation of roughness of the affected mucosa to itching and pain (Cassol-Spanemberg et al., 2019). Almost half (46.9%) of the participants in the present study had symptoms. Most erosive/ulcerative lesions were symptomatic (77.8% of cases), while all lesions with only reticular

pattern were asymptomatic. A study by Torrente-Castells et al. (2010) found that 46.2% of patients were symptomatic. However, unlike our study, in which burning was the most frequent symptom, these authors reported that pain was the most common symptom. In contrast, other similar studies observed that individuals with OLP were symptomatic in more than 92% of cases (Kaomongkolgit et al., 2019; Rimkevičius et al., 2017).

The lack of consensus of the diagnostic criteria and the different classifications of OLP patterns were identified as the main obstacle for the comparison of the studies. For a better understanding of the malignant potential of OLP there is a need of more homogeneous future studies, using a universally accepted diagnostic criteria and the same pattern classification.

5. Conclusion

In conclusion, the probability of a person with OLP have lesions with multiple bilateral/symmetric sites is 3.6 times higher than having only one bilateral/symmetric site. Moreover, older patients tend to be more likely to have plaque pattern. Besides that, OLP is a chronic inflammatory disease with dynamic behavior and, depending on the moment when the patient is evaluated, changes and combinations of the patterns are expected in the same individual over time. During the different moments of evaluations of the participants of this study, based on the clinical and histopathological features, some individuals did not meet the AAOMP criteria due to the absence of oral lesions with multifocal symmetric distribution. Therefore, this study confirms that, in a first consultation, if the patient does not present multifocal symmetric distributed lesions, the diagnosis of OLP cannot be excluded and the patient should be followed-up.

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