

## Epidemiologic study of patients attended in an Oral Medicine Service between 2014-2016

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### Abstract:

Oral medicine is a dental specialty intended to diagnose current oral diseases, as well as to diagnose and prevent oral manifestations of systemic diseases. This study aimed to evaluate the most commonly diagnosed lesions, as well the main epidemiological characteristics of the patients attended at the oral medicine clinic of São Leopoldo Mandic School - Rio de Janeiro in the period between 2014 and 2016. At the end of the study, a total sample of 175 charts was obtained, whose extracted data were analyzed and plotted. Regarding distribution by gender, we found a major presence of female patients in attendance, corresponding to 63% of our sample. Thereafter, greater proportion of patients in the age group of 60 to 69 years was observed in both genres (25 females and 14 males). Considering an ethnic distribution, it was observed that majority of the patients of both genders declared themselves as white-skinned (52 females and 30 males). Among the most diagnosed lesions at the clinic, epithelial pathology was more frequent (n = 23), followed by soft tissue tumors (n = 18), developmental defects (n = 16), bone pathology (n = 14) and dermatological diseases (n = 11). Finally, the percentage of agreement between an initial and a final diagnostic was observed, and among the majorities of the diagnoses, there was a positive correlation (84%). Thus, in this work, the population attended at the clinic consisted, in the majority, of white women between the ages of 40 and 69, with fibrous hyperplasia as most frequent diagnosis. Finally, it is important to point out that the high agreement between an initial hypothesis and the final diagnosis is of utmost importance for excellence in oral medicine attendance, evidencing a quality of the service.

**Keywords:** Epidemiology; Oral medicine; Diagnosis; Oral.

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## INTRODUCTION

Oral medicine is a dental specialty regulated by the Federal Council of Dentistry based in 181/1992 resolution. Among the main reasons for the referral of patients to an oral medicine service can be cited: clinical and surgical-outpatient management of lesions of the buccal mucosa and maxillary bones, diagnosis of oral lesions and the request for complementary preoperative tests or the diagnostic need for oral manifestations. Thus, the specialist in this area can act in different levels of attention, including, but not limited to, procedures of high complexity, such as in the support to patients with lesions requiring complex surgical care in the head and neck<sup>1</sup>.

Epidemiology is a field of study that aims to use quantitative methods to study diseases in populations and, thus, facilitate the development of prevention and control strategies<sup>2</sup>. Its importance has grown by its application in evidence-based policies, systematic reviews and analysis of social determinants of health and disease<sup>3</sup>. In oral health, the epidemiological surveys have been shown to be an important tool in the discussion of the biopsychosocial determinants of oral diseases<sup>4</sup>.

One of the main applications of epidemiological health studies is the identification of the prevalence of diseases in a given population<sup>5</sup>. They may direct the implementation of strategies for the prevention and diagnosis of oral lesions in a given population<sup>6</sup>. Thus, the identification of common risk factors can be used to integrate oral health policies around the world<sup>7</sup>.

Thus, the aim of our study was to perform a survey of the most commonly diagnosed lesions, as well as the main epidemiological characteristics of the patients attended at the Oral medicine Clinic of the São Leopoldo Mandic School - Rio de Janeiro Unit in the period between 2014 and 2016.

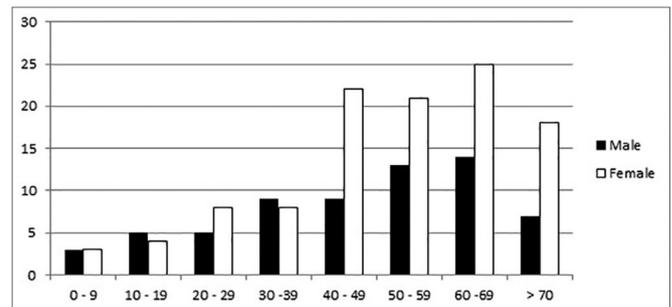
## MATERIALS AND METHODS

The present retrospective study was carried out based on the data presented in clinical records of the Oral Medicine Service of São Leopoldo Mandic, Rio de Janeiro in the period between March 2014 and June 2016. At the end of the study, we counted a total sample of 176 charts. Demographic information (gender, age and ethnicity) and final diagnosis were extracted and plotted. Oral conditions were classified in groups according relevant literature<sup>8</sup>. Most frequent diagnoses were reported separately. In addition, were included two groups: other diseases (conditions not included in any other classification and inconclusive diagnoses) and no lesions (absence of disease at examination), as previously suggested<sup>6</sup>.

Only charts whose patients had signed an informed consent form were included. This study was approved by local Ethics Committee, São Leopoldo Mandic Faculty (CAEE: 74107517.9.0000.5374).

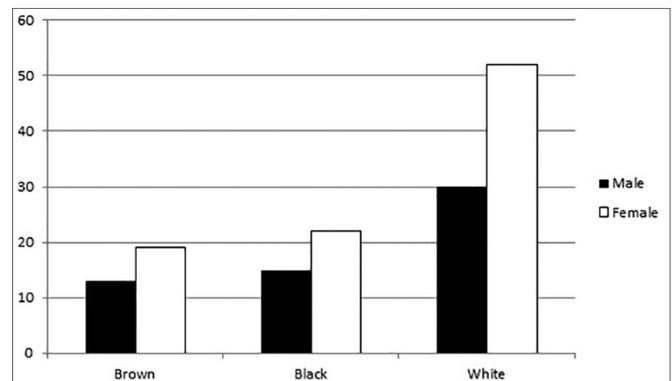
## RESULTS

Considering the medical records of the present service, a majority presence of female patients was attended, corresponding to 63% of or sample ( $n = 110$ ). Thus, the remaining 37% of the public were male patients ( $n = 65$ ). Regarding age distribution, it was observed that most of the female patients were between 60 to 69 years ( $n = 25$ ), followed by patients on the 4<sup>th</sup> ( $n = 22$ ) and 5<sup>th</sup> ( $n = 21$ ) decades of life. Information regarding age was absent in one chart. When considering the male patients, it was observed that the majority were also in the range of 60-69 ( $n = 14$ ), followed by patients between 50 and 59 years old ( $n = 13$ ) (Figure 1).



**Figure 1.** Distribution regarding gender and age of patients attended at Oral Medicine Clinic, São Leopoldo Mandic, Rio de Janeiro.

In addition, we sought to observe the ethnic distribution among the different genres. Self-declared white individuals represented most of the sample analyzed, being 52 females and 30 males. Melanoderm ( $n = 22$ ) and brown ( $n = 19$ ) females were also reported. Moreover, male patients showed similar distribution ( $n = 15$  and  $n = 13$ , respectively). Ethnic information was lacking for 17 female patients and 7 male patients (Figure 2).



**Figure 2.** Ethnic distribution of patients attended at Oral Medicine Clinic, São Leopoldo Mandic, Rio de Janeiro.

Based on the classification proposed by Neville et al. (2016), we found lesions related to epithelial pathology as being more frequent, corresponding to 16% of our sample (n = 23). Soft tissue tumors (n = 18), developmental defects (n = 16), bone pathology (n = 14) and dermatological diseases (n = 11) were also frequently reported. Salivary gland pathology, facial pain and neuromuscular diseases and odontogenic cysts and tumors, each corresponded to 7% of our sample (n = 10, each). Among the lesions considered, 13 could not be classified according the pattern adopted, and were grouped as others (9 %). A total of 27 lesions remained as incompletely diagnosed due to non-show of some patients in the appointments (Table 1).

**Table 1.** Distribution of final diagnosis in groups.

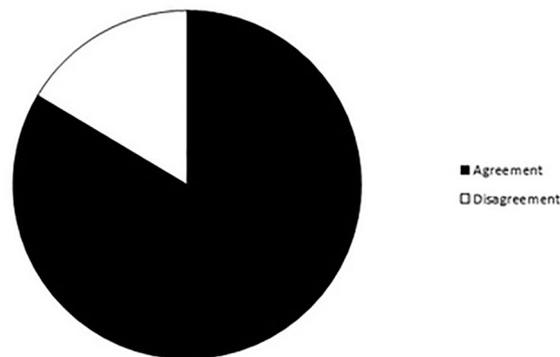
Classification	N (%)
Epithelial pathology	23 (16 %)
Soft tissue tumors	18 (13 %)
Development defects	16 (11 %)
Bone pathology	14 (10 %)
Dermatological diseases	11 (8 %)
Salivary gland pathology	10 (7 %)
Facial pain and neuromuscular diseases	10 (7 %)
Odontogenic cysts and tumors	10 (7 %)
Physical and chemical injuries	7 (5 %)
Pulpar and periapical disease	4 (3 %)
Fungal and protozoal infection	3 (2 %)
Bacterial infections	1 (1 %)
Oral manifestations of systemic disease	1 (1 %)
Allergies and immunological diseases	1 (1 %)
Hematologic disorders	1 (1 %)

Considering the lesions alone (n = 148), it was observed that inflammatory fibrous hyperplasia was the most frequent condition in the present service, corresponding to 8% of all the diagnoses emitted (n = 11). Leukoplakia/erythroplakia and cemento osseus dysplasias had the second highest occurrence (7% of the total sample, n = 10), followed by vascular alterations and lichen planus that represented 6% of the total percentage, each (n = 9 and 8, respectively) (Table 2).

**Table 2.** Most frequent diagnoses per specified condition.

Diagnosed conditions	N (%)
Fibrous hyperplasia	11 (8%)
Leukoplakia/erythroplakia	10 (7%)
Cemento osseus dysplasia	10 (7%)
Vascular alterations	9 (6%)
Lichen planus	8 (6%)

Finally, we sought to analyze the percentage of agreement between the initial diagnostic hypothesis and the final diagnosis. Among the biopsied lesions, it was observed that, based on clinical and histopathologic diagnosis, a concordance index of 84% was obtained between the first consultation of the patient and the result after the analysis of the complementary exams requested (Figure 3).



**Figure 3.** Percentage of concordance between initial and final diagnosis.

## DISCUSSION

The present epidemiological survey evidenced important characteristics of the population served in the Stomatology Clinic of São Leopoldo Mandic School - Rio de Janeiro Unit. Firstly, there was a majority presence of female patients in our sample. This data corroborates what has already been described in several previously reports<sup>6, 9-12</sup>. As a possible justification for this finding, there is the greater demand for health services by women, suggesting that there may be greater concern regarding the prevention and diagnosis of diseases among this cohort of patients.

Considering the variable age, it was observed that majority of the patients attended were categorized between 40 and 69 years. This data shows similarities with previous studies<sup>6,11</sup>. It can be speculated that one of the reasons for this higher demand is the increase in the life expectancy of the Brazilian population, which generates greater demand for healthcare services in general. Moreover, the range is compatible with lesions frequently diagnosed in the present service, such as fibrous hyperplasia.

In our study, most patients of both genders declared to be leukoderma. This ethnic distribution has been previously reported in a similar way on studies conducted in the south of Brazil<sup>12,13</sup>. It is important to emphasize that the ethnic distribution is variable among the different epidemiological studies carried out in our

country, which can be related to the historical process of miscegenation observed and the territorial extension of Brazil. A possible bias of this data is that this trait is self-declared, leading to possible subjectivity on the answers.

Epithelial pathology and benign soft tissue tumors were the main diagnoses issued at the service. This result is compatible with that reported by another study also carried out in the city of Rio de Janeiro<sup>6</sup>. This found was also reported as more frequent in a study carried in another district<sup>13</sup>. This result relates to the frequency of the lesions reported individually. Among the diagnoses observed, fibrous hyperplasia presented the greatest recurrence with a distribution consistent with several reports<sup>6,9-10,14-17</sup>. These studies were performed in different Brazilian states such as Rio de Janeiro, Rio Grande do Sul, São Paulo, Pernambuco and Paraná, showing the wide distribution of this lesion. It is interesting to note that this condition is associated with poorly adapted prostheses and is therefore more frequent in middle-aged and elderly patients, which is compatible with the predominant age range of our sample<sup>8</sup>.

The percentage of patients without a final diagnosis was 17%. This result is compatible with what was previously published in the literature, with an index of imprecise diagnosis of 19.8%<sup>12</sup>. The presence of this group of undiagnosed patients may be associated to factors related to the dental surgeon, such as anamnesis and inaccurate physical examination, or to patient avoidance and detachment.

Finally, it is important to emphasize the high percentage of agreement between the initial diagnostic hypothesis, performed at the first visit, and the final diagnosis, issued after completing histopathology examination. Other studies have reported even smaller percentages as a 60% correlation between clinical and histopathological diagnosis observed in a study carried out in Pernambuco<sup>18</sup>. Observance of the diagnostic stages and the achievement of an accurate diagnosis are of paramount importance for the correct conduction of the cases, directly impacting patients' quality of life.

## CONCLUSION

In the present epidemiological survey, predilection for female patients with ages between 40 and 69 years was observed. Also, white-skinned declared patients in both genders represented majority of our sample. Epithelial pathology and soft tissue tumors were the most frequently group of lesions diagnosed on our clinic, with an especially increased incidence of fibrous hyperplasia. Finally, we found a high agreement between the initial and final diagnosis, highlighting the excellence of this service.

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