Histopathological Diagnosis of 1,978 Oral Lesions over a Period of 22 Years in Cali, Colombia. A Retrospective Study *

Diagnóstico histopatológico de 1.978 lesiones orales en un periodo de 22 años en Cali- Colombia. Estudio retrospectivo

Diagnóstico histopatológico de 1.978 lesões orais durante um período de 22 anos em Cali, Colômbia. Estudo retrospectivo

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ABSTRACT

Purpose: Determine the frequency of histopathological diagnoses of 1978 biopsies of oral lesions in a period of 20 years in the city of Cali, Colombia. **Methods:** A retrospective descriptive observational study was conducted on 1978 histopathological diagnoses of biopsies of lesions in the oral cavity carried out during the period 2000-2022. The research is carried out in compliance with ethical requirements. The information was obtained from the records of biopsy reports of two oral pathologists from the city of Cali, the data collection was conducted by the seedbeds of 3 universities in Cali previously trained and calibrated. The information was unified in a single Excel database, the inclusion criteria were any age, any sex and complete reports. Descriptive statistical analysis was performed with the IBM SPSS Statics program. **Results:** Of the 1978 reports, 39 % corresponded to the male gender and 61% to the female gender. The average age was 45.33 ± 17.5 (Range 2-93). The most frequent histopathological diagnosis was hyperplasia (23.8 %), followed by granulomas (15.07 %). The gum (17.09 %), the periapical area (16.03 %) and the lips (13.30 %) were the sites that reported the most lesions. Histologically, connective tissue (51.82 %) and epithelial tissue (25.63 %) were the most reported, and the excisional biopsy technique was the most used (79.22 %). **Conclusion:** Hyperplastic oral lesions were the most frequent, they occurred more in women, in any site of the oral cavity and at any age. Proper diagnosis, performing biopsies and increasing evidence at the local and national level are especially important.
Keywords: biopsies; Cali, Colombia; dentistry; oral cavity; oral epidemiology; oral lesions; oral pathology; retrospective study

RESUMEN

Objetivo: Determinar la frecuencia de los diagnósticos histopatológicos de 1978 biopsias de lesiones orales en un periodo de 20 años en la ciudad de Cali, Colombia. **Métodos y materiales**: Se realizó un estudio observacional descriptivo retrospectivo de 1978 diagnósticos histopatológicos de biopsias de lesiones en la cavidad oral realizadas durante el periodo de 2000-2022. La investigación se realiza cumpliendo con los requerimientos de ética. La información se obtuvo de los registros de reportes de biopsias de dos patólogos orales de la ciudad de Cali, la recolección de datos la realizaron los semilleros de 3 universidades de Cali previamente capacitados y calibrados. Se realizo la unificación de la información en una sola base de datos de Excel, los criterios de inclusión fueron cualquier edad, cualquier sexo y reportes completos. Se realizó el análisis estadístico descriptivo con el programa IBM SPSS Statics. **Resultados**: De los 1978 reportes, el 39% correspondió al género masculino y el 61 % al género femenino. El promedio de edad fue 45,33 ± 17,5 (Rango 2-93). El diagnóstico histopatológico más frecuente fue la hiperplasia (23.8 %), seguido por granulomas (15.07 %). La encía (17.09 %), la zona periapical (16.03 %) y los labios (13.30 %) fueron los sitios que reportaron más lesiones. Histológicamente, el tejido conectivo (51.82 %) y el tejido epitelial (25.63 %) fueron los más reportados, y la técnica de biopsia excisional fue la más utilizada (79.22 %). **Conclusión**: Las lesiones orales hiperplásicas fueron las más frecuentes, se presentaron más en mujeres, en cualquier sitio de cavidad oral y en cualquier edad. Es muy importante un adecuado diagnóstico, la realización de biopsias y aumentar la evidencia a nivel local y nacional.
Palabras clave: biopsias; Cali, Colombia; cavidad oral; epidemiología oral; estudio retrospectivo; lesiones orales; odontología; patología oral

RESUMO

Objetivo: Determinar a frequência dos diagnósticos histopatológicos de 1.978 biópsias de lesões orais em um período de 20 anos na cidade de Cali, Colômbia. Métodos: Foi realizado um estudo observacional descritivo retrospectivo sobre 1978 diagnósticos histopatológicos de biópsias de lesões na cavidade oral realizadas durante o período 2000-2022. A pesquisa é

realizada obedecendo a requisitos éticos. As informações foram obtidas a partir dos registros de laudos de biópsia de dois patologistas bucais da cidade de Cali, a coleta de dados foi realizada nos canteiros de 3 universidades de Cali previamente treinados e calibrados. As informações foram unificadas em um único banco de dados Excel, os critérios de inclusão foram qualquer idade, qualquer sexo e laudos completos. A análise estatística descritiva foi realizada com o programa IBM SPSS Statics. Resultados: Dos relatórios de 1978, 39 % correspondiam ao género masculino e 61 % ao género feminino. A média de idade foi de 45,33 ± 17,5 (faixa 2-93). O diagnóstico histopatológico mais frequente foi hiperplasia (23,8 %), seguido de granulomas (15,07 %). A gengiva (17,09 %), a região periapical (16,03 %) e os lábios (13,30%) foram os locais que mais relataram lesões. Histologicamente, o tecido conjuntivo (51,82 %) e o tecido epitelial (25,63 %) foram os mais relatados, e a técnica de biópsia excisional foi a mais utilizada (79,22 %). Conclusão: As lesões orais hiperplásicas foram as mais frequentes, ocorreram mais em mulheres, em qualquer local da cavidade oral e em qualquer idade. O diagnóstico adequado, a realização de biópsias e o aumento da evidência a nível local e nacional são muito importantes.
Palavras-chave: biópsias; Cali, Colômbia; epidemiologia oral; estudo retrospectivo; odontologia; patologia oral; cavidade oral; lesões orais

INTRODUCTION

The oral cavity is composed of different anatomical structures with functions and cellular characteristics that vary from one site to another (1). The presence of injuries has been associated with different factors such as systemic diseases (2-9), cigarettes (10), alcohol consumption (11), mechanical trauma (12), injuries associated with eating disorders (11,13-14), and to characteristics of specific anatomical sites. They are also related to age, sex (1) and geographic location (15).

Most studies report the presence of oral lesions associated with malignant and benign states, or lesions in specific structures such as bone tissue or associated with systemic diseases such as diabetes, among others. (16,17). Clinical evidence is limited in reporting the prevalence of oral cavity lesions in general; There are few studies that have reported the frequency and prevalence in countries such as Turkey, Saudi Arabia (18), Slovenia (19), Malaysia (16), India (20), Jordan (21), Cambodia (22) and Mexico (23). In Latin America it has been reported in Brazil (24,25) and in Colombia in Medellín (26-26) and Bogotá (8). The studies conducted in Cali report pathologies associated with manifestations of systemic diseases, the Human Immunodeficiency Virus (HIV) and premalignant and malignant lesions (29-31). For the Colombian population, it is especially important to know the most frequent oral lesions and this knowledge will allow the initiation of new clinical research that reinforces correct conduct for the diagnosis and management of them from academia.

Oral cavity lesions are not the most frequent pathologies, but their identification is of great importance because they are tissue alterations and can be manifestations of some systemic conditions or initial diseases such as cancer that, in early identification with the performance of a biopsy. It will facilitate its control and successful treatment.

The dentist, from his academic training process, must make a timely identification with a biopsy and establish a histopathological diagnosis and adequate treatment of these lesions, and it must be equally important to other oral diseases such as caries and periodontitis. It has been reported that there are difficulties and variations in the classification systems of these pathologies (32); furthermore, increasing histopathological studies contributes to improving clinical and epidemiological studies in oral pathology. This study will establish a starting point for future research in the Colombian population and the promulgation of the importance of oral pathology in professional practice.

The objective of the study was to determine the frequency of histopathological diagnoses of oral lesions in a period of 22 years in the city of Cali - Colombia. This study contributes to knowledge, which had not been conducted in Cali, and contributes to the training and improvement of the clinical behavior of dentists in the area of oral pathology.

MATERIALS AND METHODS

An observational study with a retrospective descriptive design was carried out, the sample was taken from the records of histopathological diagnoses of two oral pathologists from the city of Cali-Colombia, during a period between 2000 to 2022. The histopathological reports correspond to the biopsies performed by two oral pathologists. The information was collected by 4 research groups from 3 universities in Cali.

The sample size was not calculated. The entire universe was taken and included all the biopsy reports of oral lesions from the two pathologists, obtaining a sample of N = 1978.

The information was unified in an Excel database with information on histopathological diagnosis, age, gender, location in the oral cavity, identified tissue and type of biopsy. The inclusion criteria were having a complete record of age, gender, histopathological diagnosis and location; sites other than the oral cavity itself with incomplete information were excluded. Age was grouped considering the life cycle that includes early childhood, childhood, adolescence, youth, adulthood and old age.

Anatomical sites include teeth, dental tissues, maxillary and mandibular bone, palate, oral mucosa, gingiva, tongue, floor of mouth, tonsils and oropharynx, salivary glands and lip. Histopathological diagnoses were considered according to the type of histological tissue that was identified, the general and specific histopathological diagnosis for each lesion.

The different anatomical and diagnostic sites between the two pathologists were unified, and the database was cleaned in Microsoft Excel. Dynamic tables were constructed with the frequency and percentage of lesions, general and histological diagnoses, and a descriptive analysis was performed with absolute and relative frequencies.

This study was approved by the Ethics and Health Committee of the Universidad del Valle and all ethical requirements in human research were met, for responsible research and with the Declaration of Helsinki. All patient identifiers were removed from the samples to protect their identification and the reports remain in the custody of each pathologist.

RESULTS

1978 histopathological diagnoses were evaluated. They occurred more in women (60.92 %) than in men (39.08 %). In relation to age, considering the life cycle, injuries were found at any age, the group that presented the most injuries was adulthood (55.4 %) followed by old age (24.36 %) and in early childhood it was reported the lowest frequency number (0.46 %). The majority of biopsies were incisional (79.22 %), and the majority corresponded to a benign lesion (95.65 %), although the percentage of malignant lesions may be underestimated due to the type of private consultation and teaching. - service that refers to pathologists. (Table 1)

TABLE 1
General characteristics

Characteristic	**N=1978**	**100%**
Life cycle		
Early childhood (0-5 years)	9	0,46
Childhood (6-11 years)	65	3,29
Adolescence (12-18 years)	119	6,02
Youth (19-26 years)	207	10,47
Adulthood (27-59 years)	1096	55,40
Old age (over 60 years)	482	24,36

Sex		
Female	1205	60,92
Male	773	39,08
Type of biopsy		
Incision	411	20,78
Excision	1567	79,22
Type of lesion		
Benign	1892	95,65
Premalignant	32	1,61
Malignant	54	2,73

Source: the authors.

Different lesions were observed according to gender, women presented more oral lesions in all anatomical sites except the upper jaw, where men seemed to be more susceptible to these (54.9 % in men: 45.1 % in women). (Table 2).

TABLE 2
Frequency of lesion by anatomical site and sex

Anatomical site	**X Age±DE**	**Female n=1205 (60,9%)**	**Male n=773 (39,1%)**	**N=1978 (100 %)**
Gum	45,3±18,8	224 (66,3)	114 (33,7)	338 (17,08 %)
Periapical zone	46,3±15,9	190 (59,9)	127 (40,1)	317 (16,03 %)
Lip	38,3±19,9	132 (50,2)	131 (49,8)	263 (13,2 %)
Jaw	37,2±17,6	111 (59,0)	77 (41,0)	188 (9,50 %)
Tonge	46,8±18,1	113 (60,4)	74 (39,6)	187 (9,4 %)
Cheeks	50,1±16,9	124 (71,7)	49 (28,3)	173 (8,7 %)
Mucous membrane	50,1±18,7	78 (60,9)	50 (39,1)	128 (6,47 %)
Alveolar ridge	56,4±14,9	60 (65,2)	32 (34,8)	92 (4,65 %)
Maxilla	41,2±19,3	41 (45,1)	50 (54,9)	91 (4,6 %)
Floor of the mouth	52,2±23,6	16 (61,5)	10 (38,5)	26 (1,31 %)
Soft palate	51,8±16,4	16 (66,7)	8 (33,3)	24 (1,21 %)
Glands	47,9±22,6	13 (61,9)	8 (38,1)	21 (1,06 %)
Frenum	35,3±17,4	10 (52,6)	9 (47,4)	19 (0,96 %)
Oropharynx	34,1±19,9	6 (42,9)	8 (57,1)	14 (0,70 %)
Condyle	30,5±15,0	2 (50,0)	2 (50,0)	4 (0,20 %)
Teeth	45,8±15,2	4 (100,0)	0 (0,0)	4 (0,20 %)
Ganglia	43,0	1 (100,0)	0 (0,0)	1 (0,05 %)

Source: the authors.

As related to age and anatomical site, the frequency increases with increasing age. People over 50 years of age showed a high frequency of gum lesions, representing more than 45 % of lesions in this anatomical site by age group. Between 30 and 40 years of age, the most common lesions are located in the periradicular area, with more than 42 % of cases; and under 29 years of age, 40 % of the total cases of lower lip lesions were observed. (Table 3)

TABLE 3
Frequency of lesions by age group

Anatomical site by age group	**<20 years** n=225 (11.4%)	**20-29 years** n=231 (11.7%)	**30-39 years** n=251 (12.7%)	**40-49 years** n=377 (19.1%)	**50-59 years** n=413 (20.9%)	**60 years +** n=481 (24.3%)	**Total Overall** N =1978 (100.0%)
Gum mucous	40 (11.8)	35 (10.4)	42 (12.4)	68 (20.1)	75 (22.2)	78 (23.1)	338 (17,08%)
periradicular zone	16 (5.1)	31 (9.9)	49 (15.7)	83 (26.6)	71 (22.8)	62 (19.9)	312 (15,77%)
Lower lip	59 (22.3)	48 (18.1)	34 (12.8)	35 (13.2)	39 (14.7)	50 (18.9)	265 (13,39%)
Jawbone tissue	32 (16.9)	38 (20.1)	34 (18.0)	36 (19.0)	26 (13.8)	23 (12.2)	189 (9,55%)
Tonge	16 (8.6)	23 (12.4)	23 (12.4)	35 (18.8)	41 (22.0)	48 (25.8)	186 (9,40%)
Cheeks Mucous	8 (4.6)	15 (8.7)	26 (15.0)	28 (16.2)	40 (23.1)	56 (32.4)	173 (8,74%)
Maxillary bone tissue	25 (26.0)	9 (9.4)	13 (13.5)	19 (19.8)	15 (15.6)	15 (15.6)	96 (4,85%)
Alveolar ridge mucous	0 (0.0)	0 (0.0)	6 (7.2)	12 (14.5)	25 (30.1)	40 (48.2)	83 (4,19%)
Hard palate mucous	6 (7.4)	5 (6.2)	4 (4.9)	9 (11.1)	23 (28.4)	34 (42.0)	81 (4,0%)
Oral cavity mucous	5 (6.2)	4 (4.9)	8 (9.9)	11 (13.6)	20 (24.7)	33 (40.7)	81 (4,0%)
Retromolar zone mucous	3 (10.0)	3 (10.0)	1 (3.3)	9 (30.0)	6 (20.0)	8 (26.7)	30 (1,51%)
Soft palate mucous	0 (0.0)	2 (8.0)	2 (8.0)	7 (28.0)	6 (24.0)	8 (32.0)	25 (1,26%))
Floor of the mouth mucous	2 (8.0)	3 (12.0)	1 (4.0)	6 (24.0)	5 (20.0)	8 (32.0)	25 (1,26%)
Oral cavity mucous	1 (5.6)	4 (22.2)	1 (5.6)	4 (22.2)	5 (27.8)	3 (16.7)	18 (0,91%))
Lip frenum	5 (27.8)	4 (22.2)	1 (5.6)	3 (16.7)	3 (16.7)	2 (11.1)	18 (0,91%)
Palate glands	0 (0.0)	1 (12.5)	0 (0.0)	3 (37.5)	1 (12.5)	3 (37.5)	8 (0,40%)
Oropharynx	3 (50.0)	2 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	1 (16.7)	6 (0,30%)
Peri implant bone tissue	0 (0.0)	0 (0.0)	0 (0.0)	1 (20.0)	1 (20.0)	3 (60.0)	5 (0,25%)
Tonsil	1 (20.0)	0 (0.0)	0 (0.0)	3 (60.0)	1 (20.0)	0 (0.0)	5 (0,25%)
Upper lip	0 (0.0)	0 (0.0)	1 (25.0)	2 (50.0)	1 (25.0)	0 (0.0)	4 (0,20%)
Dental tissue	0 (0.0)	1 (25.0)	0 (0.0)	1 (25.0)	2 (50.0)	0 (0.0)	4 (0,20%))
Oral mucous glands	0 (0.0)	0 (0.0)	1 (33.3)	0 (0.0)	1 (33.3)	1 (33.3)	3 (0,15%)
Parotid gland	1 (33.3)	0 (0.0)	1 (33.3)	0 (0.0)	0 (0.0)	1 (33.3)	3 (0,15%)
Cheeks glands	0 (0.0)	0 (0.0)	1 (33.3)	0 (0.0)	1 (33.3)	1 (33.3)	3 (0,15%)
Lower lip glands	0 (0.0)	1 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	2 (66.7)	3 (0,15%)
Uvula	1 (33.3)	1 (33.3)	0 (0.0)	0 (0.0)	1 (33.3)	0 (0.0)	3 (0,15%)
Condylar head	1 (33.3)	0 (0.0)	1 (33.3)	1 (33.3)	0 (0.0)	0 (0.0)	3 (0,15%)
Nasopalatine canal	0 (0.0)	0 (0.0)	1 (33.3)	0 (0.0)	2 (66.7)	0 (0.0)	3 (0,15%)
Floor of the mouth glands	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (100.0)	0 (0.0)	2 (0,10%)
Lingual frenum	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0,05%)

Source: the authors.

The 10 most frequent general diagnoses obtained include hyperplasia (23.86 %), granuloma (15.07 %), cyst (11.27 %), fibroma (8.65 %), papilloma (5.71 %), mucocele (3.94%), carcinoma (2.48 %), hyperkeratosis (2.33 %), argyrosis (2.17 %), and keratocyst (1.97 %). (Table 4).

TABLE 4
General histopathologic diagnosis

General Diagnosis	Frequency	Percentage
Hyperplasia	472	23,86
Granuloma	298	15,07
Cyst	223	11,27
Fibroma	171	8,65
Papilloma	113	5,71
Mucocele	78	3,94
Carcinoma	49	2,48
Hyperkeratosis	46	2,33
Argyrosis	43	2,17
Keratocyst	39	1,97

Source: the authors.

The database reported 118 histopathological diagnoses, the 10 most frequent were fibroepithelial hyperplasia (10.57 %), apical granuloma (10.06 %), fibroma (6.72 %), squamous papilloma (6.42%), hyperplasia fibrous (6.02 %), epithelial hyperplasia (5.36 %), pyogenic or telangiectatic granuloma (5.211 %), periapical odontogenic cyst (5.16 %), follicular dentigerous cyst (4.04 %), and mucocele (3 .94 %).

As mentioned above, the most common anatomical sites for the appearance of lesions were the gingiva, the periradicular area and the lower lip. (Table 5)

TABLE 5
Specific histopathologic diagnosis

Histopathologic Diagnosis	Frequency	Percentage
Fibro Epithelial hyperplasia	209	10,57
Apical granuloma	199	10,06
Fibroma	133	6,72
Squamous Papilloma	127	6,42
Fibrous hyperplasia	119	6,02
Epithelial hyperplasia	106	5,36
Pyogenic or Telangiectatic Granuloma	103	5,21
Periapical odontogenic cyst	102	5,16
Dentigerous follicular cyst	80	4,04
Mucocele	78	3,94

Source: the authors.

Regarding the general diagnosis of the lesions according to the sites, it varied according to the age of the patients. The most reported lesions in the gum were hyperplasia (30.76 %), whose reports were mainly in people over 50 years old, granuloma (25.44 %) with reports mainly in people between 40 and 49 years old, and fibroma (8.28 %) which did not demonstrate a preferential age. In the periradicular area, the most frequent lesions were granuloma (57.69 %), mainly between 40 and 59 years of age; and cyst (32.05) with a predilection for patients between 40 and 49 years old and patients over 60. Finally, the most common lesions of the lower lip were mucocele (26.03 %), and papilloma (7.54 %), In both cases, patients under 29 years of age were the most likely to suffer from them. (Table 6).

TABLE 6
Frequency of histopathologic diagnosis by age

Keratocyst	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
Cyst	8 (8.0)	13 (13.0)	19 (19.0)	23 (23.0)	16 (16.0)	21 (21.0)	100 (100.0)
Granulation tissue	0 (0.0)	1 (8.3)	1 (8.3)	4 (33.3)	1 (8.3)	5 (41.7)	12 (100.0)
LOWER LIP	59 (22.3)	48 (18.1)	34 (12.8)	35 (13.2)	39 (14.7)	50 (18.9)	265 (100.0)
Angiofibroma	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
Carcinoma	0 (0.0)	0 (0.0)	1 (50.0)	0 (0.0)	0 (0.0)	1 (50.0)	2 (100.0)
Condyloma acuminata	2 (40.0)	1 (20.0)	0 (0.0)	1 (20.0)	0 (0.0)	1 (20.0)	5 (100.0)
Dysplasia	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
Fibrohemangioma	1 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	1 (33.3)	1 (33.3)	3 (100.0)
Fibroma	0 (0.0)	1 (4.2)	5 (20.8)	3 (12.5)	5 (20.8)	10 (41.7)	24 (100.0)
Granuloma	1 (12.5)	1 (12.5)	2 (25.0)	1 (12.5)	1 (12.5)	2 (25.0)	8 (100.0)
Hemangioma	0 (0.0)	2 (15.4)	5 (38.5)	0 (0.0)	3 (23.1)	3 (23.1)	13 (100.0)
Hyper orthokeratosis	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)
Hyperplasia	14 (18.7)	10 (13.3)	9 (12.0)	10 (13.3)	16 (21.3)	16 (21.3)	75 (100.0)
Hyperkeratosis	1 (25.0)	0 (0.0)	0 (0.0)	2 (50.0)	1 (25.0)	0 (0.0)	4 (100.0)
Mucocele	20 (29.0)	22 (31.9)	10 (14.5)	7 (10.1)	4 (5.8)	6 (8.7)	69 (100.0)
Neurofibroma	0 (0.0)	1 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	2 (66.7)	3 (100.0)
Nevus	0 (0.0)	1 (50.0)	0 (0.0)	0 (0.0)	1 (50.0)	0 (0.0)	2 (100.0)
Papilloma	11 (55.0)	2 (10.0)	0 (0.0)	2 (10.0)	3 (15.0)	2 (10.0)	20 (100.0)
Pemphigus	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)

Source: the authors.

TABLE 7
Frequency of diagnosis by sex

Row labels	Age±DE	Female	Male	Total
Gum	45.3±18.8	224 (66.3)	114 (33.7)	338 (100.0)
Gum Mucosa	45.3±18.9	223 (66.2)	114 (33.8)	337 (100.0)
Pyogenic or Telangiectatic Granuloma	39.7±17.8	62 (78.5)	17 (21.5)	79 (100.0)
Fibroepithelial hyperplasia	46.2±20.8	26 (60.5)	17 (39.5)	43 (100.0)
Fibrous Hyperplasia	47.4±18.1	19 (61.3)	12 (38.7)	31 (100.0)
Periapical Zone	46.3±15.9	190 (59.9%)	127 (40.1)	317 (100.0)
Mandibular Bone Tissue	43.4±19.2	3 (60.0%)	2 (40.0)	5 (100.0)
Apical Granuloma	46.8±20.5	2 (50.0%)	2 (50.0)	4 (100.0)
Fibro-osseous Dysplasia	30.0	1 (100.0%)	0 (0.0)	1 (100.0)
Maxillary Bone Tissue	37.6±20.7	1 (20.0%)	4 (80.0)	5 (100.0)
Follicular Dentigerous Cyst	40.3±21.1	0 (0.0%)	3 (100.0)	3 (100.0)
Osteosclerosis	14.0	1 (100.0%)	0 (0.0)	1 (100.0)
Odontogenic Keratocyst	53.0	0 (0.0%)	1 (100.0)	1 (100.0)
Periradicular Zone	46.5±15.8	186 (60.6%)	121 (39.4)	307 (100.0)
Apical Granuloma	47.9±14.6	117 (61.9%)	72 (38.1)	189 (100.0)
Periapical Odontogenic Cyst	44.3±17.1	62 (60.8%)	40 (39.2)	102 (100.0)
Periapical Odontogenic Cyst	52.7±26.2	3 (50.0%)	3 (50.0)	6 (100.0)
Lip	38.3±19.9	132 (50.2)	131 (49.8)	263 (100.0)
Lower lip glands	20.0	0 (0.0)	1 (100.0)	1 (100.0)
Monomorphic Adenoma	20.0	0 (0.0)	1 (100.0)	1 (100.0)
Lower lip	38.3±20.0	130 (50.2)	129 (49.8)	259 (100.0)
Mucocele	30.4±17.2	22 (34.4)	42 (65.6)	64(100.0)
Fibroepithelial Hyperplasia	47.8±17.9	18 (56.3)	14 (43.8)	32 (100.0)
Squamous Papilloma	25.2±20.3	17 (63.0)	10 (37.0)	27 (100.0)
Upper lip	47.0±7.5	2 (66.7)	1 (33.3)	3 (100.0)
Hemangioma	48.0	1 (100.0)	0 (0.0)	1 (100.0)
Fibro epithelial Hyperplasia	39.0	0 (0.0)	1 (100.0)	1 (100.0)
Intramucosal inclusion cyst	54.0	1 (100.0)	0 (0.0)	1 (100.0)

Source: the authors.

Women had more oral lesions than men, with lesions in the gum, periradicular area and lower lip being more common in women than in men. The main anatomical site where gum lesions were located was the mucosa with 99.07 % of the total cases reported in the gum. The most frequent lesions in the gum mucosa were pyogenic granuloma (23.44 %), fibroepithelial hyperplasia (12.75 %), and fibrous hyperplasia (9.19 %) (Table 7).

DISCUSSION

For histopathological diagnosis, excisional biopsies in the oral cavity are the most frequent, in our study they were performed in 79.22 %, and incisional biopsies in 20.78 %, coinciding with what was reported in studies by Arango de Samper. *et al.* (28) and August M *et al.* (33).

We also found that oral lesions are significantly more frequent in the female population (60.9 %) than in the male population (39.1 %). This is in line with what was found in a prospective study carried out in Turkey in patients with removable partial dentures, where it was observed that female patients were more likely to suffer from oral lesions (72 %) than male patients (28 %). (34). However, these same

results contradict what is reported in a cross-sectional study carried out in India with patients who smoke and chew tobacco, where men were the most likely to present oral lesions (35). This discrepancy could be explained based on the habits presented by the patients in the study by Patil *et al,* with the male population being more prone to these activities, the same reason that would explain the clear superiority of male patients in the population of their study.

In previous studies, it has already been mentioned that the type of lesion most frequently appearing in the oral cavity is hyperplasia, apical granulomas and mucocele. In this study we found that these lesions are among the 10 most frequent, the main ones being hyperplasia (10.57 %), apical granuloma (10.06 %) and fibroma (6.72 %), for which our This study supports and also expands previously published information (36,37).

Due to gaps in the database, such as the oral conditions, systemic conditions and habits of the patients from whom the samples were extracted, it is not possible for us to carry out a more specific and accurate characterization of the patients that would allow us to look for correlations between oral lesions and these conditions. Furthermore, the difficulty in unifying the concepts of both oral pathologists and the lack of use of the International Classification for Anatomical and Diagnostic Sites greatly delayed the completion of the study. However, our study allowed for a good characterization of the frequency of oral lesions by sex and age group.

This study impacts clinical practice with the relevance of identifying the lesions and, through biopsies, establishing their diagnosis and increasing the evidence in Colombia of their frequency to know what their appropriate treatment should be when it is some type. specific lesion such as premalignant lesions or associated with some systemic condition.

Dentists must know the importance of identifying an alteration in the tissues of the oral cavity and have the ability to perform biopsies to define an adequate diagnosis and treatment.

CONCLUSIONS

The evidence in this study shows that oral lesions occur most frequently in the gingiva, the periradicular area, and the lower lip, with the most frequent diagnoses being fibroepithelial hyperplasia, apical granuloma, and fibroma. A direct relationship was also associated between the sex and age of the patients and the possibility of presenting oral lesions, with women and people over 60 years of age being the most prone to this.

It is necessary to include in academic training the importance of taking biopsies and encourage their practice for the correct identification of oral lesions, their possible relationship with systemic conditions, and the adequate treatment of said lesions. For this reason, the emphasis and training required to be able to identify when they should take a biopsy of a lesion and know how to choose and perform the most appropriate biopsy technique in each situation, is crucial for the correct training of professionals in the area of dentistry. , so that the position of the dentist as a comprehensive health professional is reinforced.

These practices will help us increase evidence and carry out multicenter studies that will allow specific lines of research to impact academia and decision-making in the management of oral lesions.

RECOMMENDATIONS

Studies with large sample sizes and long follow-up times must continue to be conducted in Colombia, to be able to carry out epidemiological studies of the impact of oral pathology and to train and raise awareness among students in performing oral biopsies

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