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Epidemiological study of fibroma at Iraqi hospitals from 2010 to 2020

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Abstract
Fibroma is an uncommon benign tumor of oral cavity with usually the tongue, gingival, and buccal mucosa being the most common sites, which often introduces as a single asymptomatic skin-colored lesion with unknown clinical diagnostic characteristics. The objectives of the present study were to search clinic pathological aspects of fibroma diagnosed at different hospitals in Iraq and compare the findings with epidemiological data from different governorates locations. Cases of benign tumor in different sites of tongue and mouth region at different governorates in Iraq 2010 and 2020 were introduced. Patient gender, age group, sites, morphology and annual patients of the tumor were presented. Descriptive statistical analysis of the data was performed using the frequencies of demographic variables. Among the 159 patients of benign tumors in mouth and tongue, there was comprised 81 patients with percentage (50.10%) of male and 78 patients with percentage (49.90%) of female and the male to female ratio was 1.04:1. The mean patient age was 45.44 years. Baghdad governorate preponderance for the other governorates due to there were different hospitals widespread exist. 2019 year is the highest value (34) patients as compared to the other years. The most age group effected (52) patient in (40-60). In conclusion, fibroma are the most frequent benign. Comparing the current data with previous studies on fibroma, one can be observed that some demographic characteristics and the predominance of fibroma vary in different geographic regions.

Keywords: Fibroma, oral cavity, epidemiological, gingival, buccal mucosa

Introduction

Fibroma is defined as an uncommon benign tumor of oral cavity with usually the tongue, gingival, and buccal mucosa being the most common sites [1]. It often presents as a single asymptomatic skin-colored lesion with unidentified clinical diagnostic characteristics [2]. Moreover, fibroepithelial polyp (fibroma) is a benign soft-tissue neoplasm in the oral cavity [3]. The synonyms like irritation fibroma, traumatic fibroma, and a fibrous nodule or fibroma are used interchangeably [4]. It occurs due to trauma or local irritation. An oral fibroma is a type of mouth sore that consists of localized connective tissue that becomes irritated and inflamed [5]. Fibroma is commonly slow growing, painless, soft surface lesion and the color is marginally paler than the adjacent healthy tissue [6]. Oral fibroma can be pink or white and are generally smooth and raised [7]. Unlike their softer, fat-filled cousins, the lipoma, an oral fibroma is usually firm to the touch [8]. Such lesions are simply distinguishable and classified into diagnoses like granuloma, peripheral ossifying fibroma, pyogenic, etc [9]. Fibromas most often appear inside the cheeks, on the sides of the tongue, or the lips and are usually less than one centimeter in diameter [10]. The incidence among male and female is the same, with all ages susceptible to them [11], as displayed in figure 1.

Fig 1: Fibroma of the gingival [12].

Methodology

Study design

The related patients were gathered from different hospitals of Iraq from 2010 to 2020 in the following confirmed centers:

1. Department of oral and maxillofacial pathology, college of dentistry, university of karbala.
2. Cancer registry center at ministry of health/Iraq.
3. Different hospitals in baghdad and other governorates.

Methods

Data Collection Tools

This study were collected the data from the filing procedure and archives of patients from 2010 to 2020 using data collection sheet ordered and created. The processed case sheet collected data including:

1. Demographic factors of the patients (gender, age, and private information).
2. Tumor related information
3. Anatomical location and clinical behavior.
4. Archives of patient recorders in different hospitals.

Raw data must be converted into a computerized database format. These data must be checked for errors using range and logical data cleaning methods. Statistical analysis were done by using statistical package for social sciences (spss) version 26-computer software in association with microsoft excel 2016. Frequency distribution and percentages for selected variables describing the reported patients with fibroma were done.

Results

The data collection were collected (159) patients, as fibroma that were recorded in 9 Iraqi governorates with perecntage: baghdad (84.9%), basrah (3.8%), nasiria (3.1%), diwanyah, kut and muthanna (1.9%), respectively, mesan (1.3%), and babil and najaf (0.6%), respectively, as shown in figure 2.

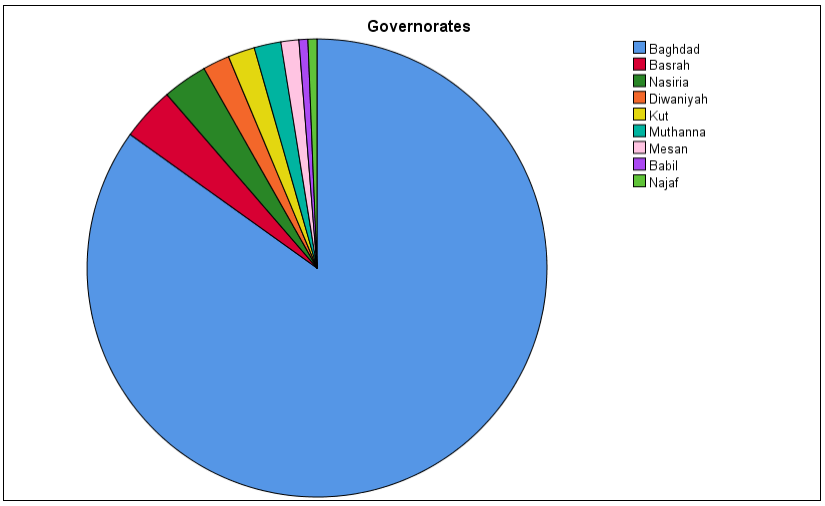

Fig 2: Pie chart of patient governorates.

From figure 2, it can be obviously showed that the maximum percentage (84.9%) was recorded in Baghdad governorate while the lowest percentage (0.6%) was recorded in Babil and Najaf governorates, respectively.

For annual patients, there were recorded (11) years in Iraqi governorates from 2010 to 2020: 2010 (24), 2011 (9), 2012 (17), 2013 (9), 2014 (4), 2015 (13), 2016 (6), 2017 (21), 2018 (13), 2019 (34), 2020 (9), as shown in table 1.

Table 1: Frequency distribution of annual patients.

		Frequency	Percent	Valid percent	Cumulative percent
Valid	2010	24	15.1	15.1	15.1
	2011	9	5.7	5.7	20.8
	2012	17	10.7	10.7	31.4
	2013	9	5.7	5.7	37.1
	2014	4	2.5	2.5	39.6
	2015	13	8.2	8.2	47.8
	2016	6	3.8	3.8	51.6
	2017	21	13.2	13.2	64.8
	2018	13	8.2	8.2	73.0
	2019	34	21.4	21.4	94.3
	2020	9	5.7	5.7	100.0
	Total	159	100.0	100.0	

From table 1, it can be clearly observed that the highest value (34) was recorded in 2019 year while the lowest value (4) was reported in 2014 year.

For gender patients, 81 patients of male and 78 patients of female that are classified as fibroma into benign tumor with respect to diagnosis, as displayed in figure 3.

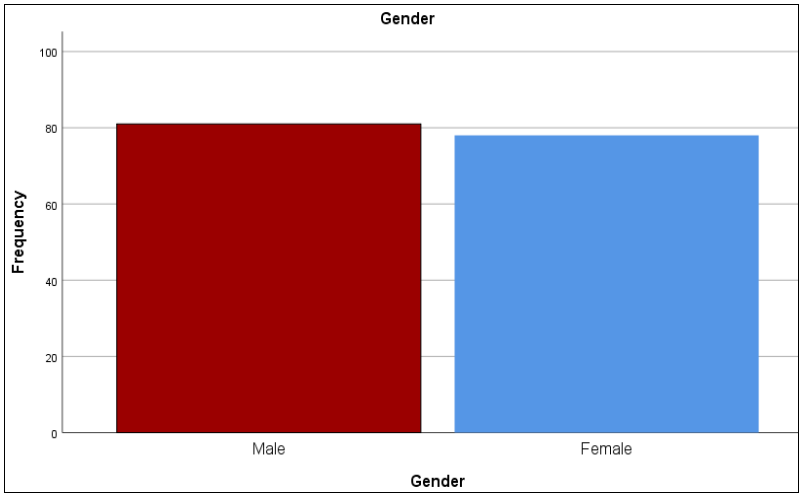

Fig 3: Bar-chart of fibroma by gender.

The relative incidence of age groups by gender that divided into four groups. The most affected age groups (28) was in (40-60) and (60+) of male, as shown in table 2.

Table 2: The relative incidence of age groups categories by gender.

Age groups	Male	Female	Total	M:f
(15-25)	12	14	26	1:1.16
(25-40)	13	22	35	1:1.69
(40-60)	28	24	52	1.16:1
60+	28	18	46	1.55:1
Total	81	78	159	1.04:1

For patients' site, there were recorded (5) sites with percentage comprising: tip (39%), lateral border (35.8%), dorsal surface (16.4%), ventral surface (5.7%) and base (3.1%). The maximum percentage was observed in tip and the minimum percentage in base, as shown in figure 4.

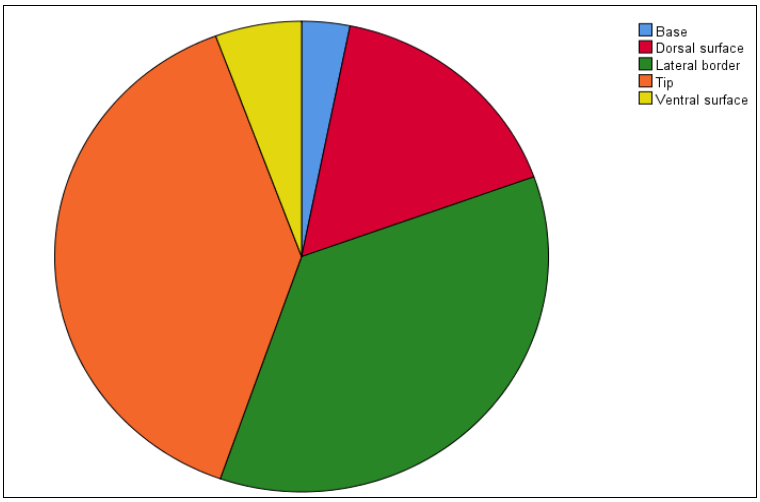

Fig 4: Pie chart of patients' sites.

The relative frequency of fifth sites of fibroma with respect to gender. It can be obviously observed that male (34) more effected than female (28) in tip site. The maximum frequent (62) was occurred in tip for both gender. The minimum frequent (5) was appeared in base, as scheduled in table 3.

Table 4: the distribution of fifth sites with respect to gender.

		Sites					Total
		Base	Dorsal surface	Lateral border	Tip	Ventral surface	
Gender	Male	4	14	26	34	3	81
	Female	1	12	31	28	6	78
Total		5	26	57	62	9	159

Discussion

Epidemiologic studies introduced in different researchers of the world report differences in the incidence. This study introduced the demographic and clinicopathologic aspects of (159) patients of fibroma diagnosed at different hospital in Iraq. According to our results, baghdad governorates was the most rate of patients due to there were different hospitals widespread exist. 2019 year was the highest frequent patients of fibroma because there was several patient in the middle of covid-19, this result was in line with [13]. 34% of all patient sites occurred in tip site. Different governorates patients rate were recorded. Several studies have investigated the frequency of fibroma according to clinical examination like [14] and [15]. Male patient rate of fibroma is slightly higher than female and this results was in acceptance with [16]. However, there was not in line with [17]. Tip site was the most common sites in the current investigation of fibroma, this result was in acceptance with [18].

Conclusion

Fibroma is considered as the first most benign tumor affecting mouth and tongue. This study presented a distinct entity appearing exclusively on the gingival. This entity is observed exclusively on the gingival and can be histologically well-known from other general well-established reactive gingival lesions. Moreover, fibroma is the most biologically damaging and changeable tumor of the mouth and tongue occurring primarily in the fifth decades of human life. The ratio of male to female is (1.04:1). The most affected of fibroma of age group (40-60) was (52) patients for both gender. Further research with sufficient clinic pathological analysis and long-term follow-up may aid to know fibroma benign.

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