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Tongue Anomalies Occurrence in Patients from Collage of Dentistry/University of Baghdad 2018-2019

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Abstract

To evaluate the occurrence of the most common tongue developmental anomalies in patients attending the teaching hospital of the University Of Baghdad\ College Of Dentistry and determine their distribution between males and females (2018-2019).Examination of 700 patients was done clinically by the use of probe and dental mirror. The patients age that was included was from (30-39) years old. The developmental anomalies were more in females (66%) than males and were widely distributed at age of 39years (20%), while the lowest percentage was recorded at the age of 30 (2.6%). The most widely distributed anomalies of the tongue was the fissure tongue 40%. The anomalies that were found to be most prevalent were fissure tongue and followed by geographic tongue and some of them were associated with each other and they found to be increasing with age. They were more in females than in males.

Introduction:

The tongue is considered as an important muscular organ in speech, mastication and deglutition. It also affects facial development, growth and dental occlusion [(1)]. The tongue is a deformable structure, has no bones, joints nor air filled chambers [(2)]. The tongue develops from the median lingual swelling[(3)]. The developmental anomalies of the tongue is a result of a disturbances during the human growth and development. These anomalies include in most cases geographic tongue; which is considered as a benign and generally an asymptomatic lesion. Some patients may experience burning sensation or pain that occur especially while ingesting spicy or acidic foods [(4)]. Fissure tongue is diagnosed clinically with the appearance of fissures of varying depth (up to 6mm depth are apparent on the tongue dorsal surface[(5)]. The median rhomboid glossitis can appear as a rhomboid or rounded painless plaque with a well-defined margins with a deep reddish or pinkish color due to the atrophy of the papillae, and a firm texture to palpation [(6)]. A hairy tongue is caused by elongation of the filliform papillae leading to a hair like appearance of the tongue. "tongue-tie" or ankyloglossia is another rare anatomical congenital abnormality[(7)]. In macroglossia anomaly, the tongue can protrude between the incisors at rest [(8)]. Microglossia is also a very rare anomaly or malformation in

which the tongue is so small that lengthens and stretches when we grab it with the forceps [9].

Subject and methods:

The sample of the study included patients attending the teaching hospital in the college of Dentistry/Baghdad University. Seven hundered patients were examined clinically from November 2018 to June2019. After obtaining their informed consent only the sample who fulfilled the following criteria was included, the patient with age range from (30-39), only Iraqi patient included in the sample. The clinical examination for whole samples carried out by using dental mirrors and dental probes for the detection of the presence of any type of tongue anomalies and assessment of tongue anomalies, Fissure tongue, Geographic tongue, Hairy tongue, Median rhomboid glossitis and Tongue tie (ankyloglossia).

Results:

Distribution of tongue anomalies according to gender. In current study 150 patients had tongue anomalies among 700 patients, 100 of them were female (66%) and 50 of them were male (34%). as shown in Table (1). Distribution of tongue anomalies according to age group. According to Fig (1), tongue anomalies were widely distributed at age 39 years (20%) then (16.6%) at age 38 years and the lowest percentage was recorded at age 30 years (2.6%), also there was a high significant difference at age 39 years while at age 38 years there was a significant difference as shown in Table(2). Distribution of tongue anomalies according to the types. In current study, the fissure tongue widely distributed anomalie as 40%, then geographic tongue 36%, then hairy tongue 20% then median rhomboid glossitis 3.4% and the lowest distribution was tongue tie 0.6% as shown in Fig (2), Table (3) illustrated that there was a high significant difference which was recorded in fissure tongue.

Discussion:

The tongue is considered as an accessible organ in the oral cavity, It can be considered a very good reflection of systemic diseases. Functions of the tongue can include positioning of the food on the teeth, swallowing initiation, breathing control, development & growth of the jaw, taste, speech, pain, chewing and sucking perception [10]. In the current study the tongue anomaly prevalence were found to be more in females than in males and this may be due to the hormonal disturbance in females is more than in males, this result agrees with(Anas,2018) [11] as they found that females recorded (31.2%) but male recorded (29%), but disagree with (Sandhya and sivapathasundharam,2004)[12] as they observed that the tongue anomalies in all groups are more in males than in females with a ratio of 1.2:1. The most common tongue anomalies was the fissure tongue and followed by the geographic tongue and the lowest anomaly was the tongue tie and this agrees with (Aljawfi, 2014) [13]and this can be due to that most of the patients attending the hospital had systemic diseases, and fissure tongue and geographic tongue are associated with systemic disease, but disagrees with(Mojarrad and Bakianian ,2008) [14] in which they found that the most frequent anomaly was geographic tongue (27%) and the fissured tongue (12.9%). Also in the current study, the tongue anomalies increases with age and this agrees with (Mojarrad and Bakianian ,2008) [14] and this may be due to the increased irritation of food with age. Allergy is considered as the main cause of geographic tongue and Fissure tongue, and in most cases is associated with diabetic mellitus and most of the patient attending to our hospital had diabetes mellitus. We also observed that there was an association between the fissure tongue and the geographic tongue in most of the cases and this agrees with (Voros-Balog et al., 2003) [15] in which they found that Tongue lesions were found in 35.11% of all the subject examined. Fissured tongue was the most frequent lesion (29.2%). Geographic tongue was found in (5.7%), and a relationship was

found between fissured and geographic tongue. Among the patients with the geographic tongue (44.82%) also had fissured tongue.

Conclusions:

1-The prevalence of the tongue anomalies were higher in females than in males.

2-The percentage of the tongue anomalies increases with age.

3-The most prevalent tongue anomalies was the fissure tongue followed by the geographic tongue and the lowest one was the tongue tie.

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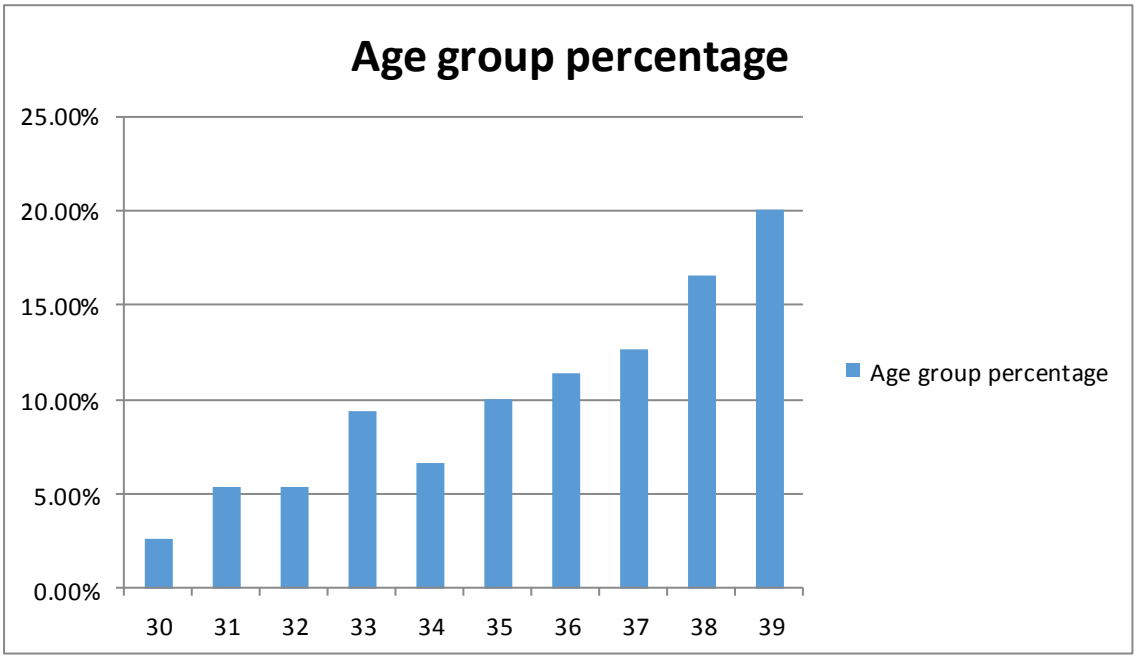

Fig.(1): Age groups percentage of tongue anomalies

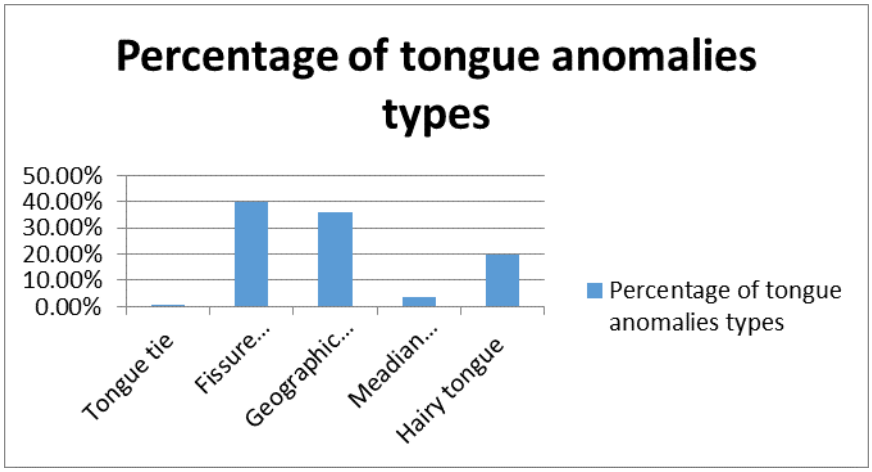

Fig.(2):Percentage of tongue anomalies types.

Table (1): Distribution of tongue anomalies according to gender

gended	**number**	**percentage**
female	100	66%
male	50	34%
total	150	100%

Table (2): Distribution of tongue anomalies according to age group and Chi Square value

age	female	male	P (Chi Square)
30	1	3	0.93 n sig
31	4	4	0.68 n sig
32	5	3	0.66 n sig
33	8	6	0.33 n sig
34	5	5	0.7 n sig
35	8	7	0.24 n sig
36	12	5	0.09 n sig
37	11	8	0.06 n sig
38	20	5	0.02 sig
39	26	4	0.00 h sig

($0.05 \geq P > 0.01$=significant, $P \leq 0.01$=high significant)

Table (3): Distribution of tongue anomalies according to the types and Chi Square value

Types	female	male	P (Chi Square)
Tongue tie	1	0	-
Fissure tongue	53	7	0.00 h sig
Geographic tongue	27	27	0.9 n sig
Meadian Rhomboid tongue	5	0	-
Hairy tongue	14	16	0.6 n sig

($0.05 \geq P > 0.01$=significant, $P \leq 0.01$=high significant)

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