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Factors Related to Maxillofacial and Stomatology Pathologies at Sylvanus Olympio University Teaching Hospital of Lomé

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Abstract

Introduction. There is no data on the epidemiology of all maxillofacial and stomatological pathologies in Togo. The objective of this study was to identify the main pathologies encountered in maxillofacial and stomatological consultations at the Sylvanus Olympio University Hospital in Lomé, and potential correlations with epidemiological and clinical data. **Materials and Methods.** This was a retrospective and descriptive study of consultation registers and medical records of patients consulted in Stomatology and Maxillofacial Surgery from January 2015 to December 2022. **Results.** We collected 4126 cases of maxillofacial and stomatological pathologies. The average annual hospital recruitment rate was 515.75 cases. The mean age of the patients was 37.40 years ± 12.20 years with extremes of 2 days and 87 years. The sex ratio was 1.30. Patients from the informal sector represented 52.30%. The majority of patients resided in Greater Lomé (58.20%). Infectious pathology was found in 52.10%, dominated by cellulitis of dental origin in 60.20% of cases. Traumatic pathology was found in 26.40%, with facial fractures in 22.10% and orbitozygomatic fractures in 16.6%. Tumor pathology (12.10%) was predominated by epulis (35.40%) and ameloblastoma (22.40%). Malformative pathology represented 6.40% of all cases; It was predominated by orofacial clefts (56.50%). Functional pathology (5.60%) was predominated by masticatory dysfunctions (MD) in 65.50%; these were found in 78.30% of cases in women. **Conclusion.** Maxillofacial and stomatological pathologies are not uncommon in Togo. Given the lack of awareness and ignorance of these pathologies among the

population and some practitioners, emphasis must be placed on information and awareness regarding their etiologies and manifestations, in order to avoid complications and sequelae.

Keywords

Maxillofacial, Stomatology, Pathologies, Lomé-Togo

1. Introduction

Maxillofacial surgery suffers from a lack of awareness among the general public and even among practitioners, but is booming thanks to international media coverage in recent years and the first facial allotransplants [1]. Stomatology etymologically refers to the medical specialty devoted to the study of the mouth and its appendages, in normal or pathological states. However, it is more broadly concerned with the entire orofacial sphere. Maxillofacial trauma is at the forefront of these conditions, with a constant increase among young adults due to the growing number of vehicles. The latter has contributed to road traffic accidents, of which it is the main etiology [2]. Maxillofacial infections, particularly odontogenic cellulitis, are also a public health concern due to their severity and frequency. Tumor pathologies are dominated by ameloblastoma, a benign tumor, but responsible for local aggressiveness [3]. Regarding malformative pathologies, 700 cases of cleft lip and palate were treated at Lomé in 2022 [4]. Togo currently has only three maxillofacial surgeons to manage all pathologies in this specialty. The objective of this study was to investigate the factors associated with the occurrence of the main pathologies encountered in maxillofacial and stomatological consultations at the Sylvanus Olympio University Hospital in Lomé from January 2015 to December 2022.

2. Patients and Methods

The department has two inpatient rooms with a total capacity of 20 beds, which it shares with the ENT department, an operating room, and a minor surgery room. Maxillofacial Surgery (MFS) consultations are carried out in the odontostomatology unit. The activities are divided into consultations in the odontostomatology unit, and surgical interventions performed in the common block shared with the ENT department. This was a retrospective and analytical study based on consultation registers and patient files. The study took place from August to December 2023 and covered the period from January 2015 to December 2022, *i.e.* 8 years. We included in this study all patients who consulted in the department for stomatology and maxillofacial pathologies during the study period. We excluded incomplete and unusable records. Data collection was conducted using a pre-established survey form. The data collected came from the hospitalized patients' medical records and surgical report registers. Access to patients' medical records was subject to handwritten authorization from the head of the Stomatology and Maxillofacial

Surgery (MFS) department of the Sylvanus Olympio University Teaching Hospital and the Director of the Sylvanus Olympio (SO) University Teaching Hospital. Patient anonymity was respected throughout the study. We obtained approval from the Ethics Committee of the Faculty of Health Sciences at the University of Lomé. The main parameters studied were socio-epidemiological data (age, sex, profession), the overview of the different maxillofacial and stomatological pathologies, and the correlations between socio-demographic data and the pathologies found. The data collected were analyzed using Epi Info 7 software. The results were presented as proportions for qualitative variables; and as means with standard deviation for quantitative variables.

3. Results

3.1. Epidemiological Aspects

A total of 4890 patients consulted the department during the study period. Of these, 4126 patients were selected according to inclusion/exclusion criteria in patients and methods section. Two thousand three hundred and twenty-eight patients were male (56.40%), and the sex ratio was 1.30. The mean age of patients was 37.40 years ± 12.20 years, with a range of 0.20 days and 87 years. The age groups of 20 to 40 years and 40 to 60 years represented 35.10% (n = 1447) and 31.10% (n = 1284), respectively. Of the 4126 patients consulted, those from the informal sector accounted for 52.30% (n = 2157). Fifty-eight point two percent of patients came from the greater Lomé region. Infectious pathology accounted for 52.10% and trauma 26.40% (Table 1).

Table 1. Distribution of patients by pathology group.

	Number (n)	Percentages (%)
Infectious pathology	**2151**	**52.10**
Trauma pathology	**1089**	**26.40**
Tumor pathology	392	9.50
Malformation pathology	262	6.40
Functional pathology	232	5.60
Total	**4126**	**100**

Cellulitis of dental origin accounted for 60.20% of all infectious pathology. Accidents of wisdom tooth development accounted for 11.90% (n = 255), maxillary sinusitis of dental origin 6.70% (n = 144), infectious stomatitis and sialitis 5.90% each (n = 128), apicodental cysts 5.10% (n = 109), and mandibular osteitis 4.30% (n = 92).

Facial fractures accounted for 22.10% (n = 241) of all trauma, and orbitozygomatic fractures 16.60% (n = 180). Traumatic facial injuries accounted for 15.80% (n = 172), mandibular fractures 15.70% (n = 171), and nasal bone fractures 1.90% (n = 21).

Regarding tumor pathology, epulis represented 41.80% (n = 79) and ameloblas-

toma 26.50% (n = 50) of all benign tumors. Ossifying fibroma was found in 14.80% (n = 28), fibrous dysplasia 11.10% (n = 21), and pleomorphic adenoma 5.80% (n = 11). Among malignant tumors, squamous cell carcinoma was found in 5 cases, and adenoid cystic carcinoma in 3 cases.

Fifty-six point five percent (n = 48) of the observed malformations were orofacial clefts, and facial asymmetry was found in 17.20% (n = 45). Facial dysmorphoses accounted for 14.50% (n = 38) and hypertrophic tongue-tie 11.80% (n = 31). Sixty-five point five percent (n = 152) of patients presented with a functional pathology, including masticatory system dysfunction (MSD), 16.80% (n = 39) with trigeminal neuralgia, and 12.50% (n = 29) with functional temporomandibular dislocation.

3.2. Correlation Study

3.2.1. Age/Disease Group Correlation

There was an epidemio-clinical correlation between age and the following disease groups:

- Trauma and age with p = 0.001.
- Malformative pathology and age with p = 0.002 (Table 2).

Table 2. Correlation between age and pathology groups.

	[0 - 20[	[20 - 40[	[40 - 60[	[60 - 80[	≥80 (year)	Number (n)	p-value
Infectious	319	712	856	178	86	2151	0.510
Trauma	217	483	248	113	28	1089	0.001
Tumor	88	106	92	92	14	392	1.120
Malformative	182	80	0	0	0	262	0.002
Functional	46	66	88	25	7	232	0.140
Total	852	1447	1284	408	135	4126	

3.2.2. Occupation/Disease Group Correlation

There was also an epidemio-clinical correlation between occupation and the following disease groups. There was a statistically significant relationship between:

- Trauma and occupation with p = 0.003.
- Malformative pathology and occupation with p = 0.001 (Table 3).

Table 3. Correlation between occupation and pathology groups.

Pathologies	Informal sector	Civil servant	Student	Retired	Unemployed	Numberf (n)	p-value
Infectious	1378	624	59	63	27	2151	0.440
Trauma	478	391	46	81	38	1089	0.003
Tumor	176	101	10	89	16	392	2.210
Malformative	0	0	182	0	135	262	0.001
Functional	125	42	18	35	12	232	0.870
Total	2157	1158	315	268	228	4126	

3.2.3. Sex/Disease Group Correlation

Seventy-eight point three percent of patients with TMD were female with a p = 0.002. There was a statistically significant relationship between sex and TMD.

3.2.4. Occupation/Trauma Pathology Correlation

Similarly, trauma pathology was strongly correlated with occupation (p = 0.003) and malformation pathology with occupation (p = 0.001).

4. Discussion

Of 4890 patients who consulted in the department during the 8-year study period, we collected 4126 patients. Some patients are referred and treated in ENT or other departments, as well as by traditional medicine. Lack of knowledge of the specialty could therefore be one of the causes. Those whose age was between 20 - 40 years were in the majority with 35.10%. The proportion of people aged under 25 and under 15 years represents respectively 60.60% and 42%. We found a male predominance (56.40%). Ouoba *et al.* had reported a male predominance of 60% in a study carried out on stomatological and maxillofacial pathology [5]. Maxillofacial and stomatological pathology is dominated by infections and traumatology (78.50%) which are the prerogative of the male subject [6]. The majority of patients (58.20%) resided in Greater Lomé. Apart from malformation pathology, which affected more children not yet of working age, patients from the informal sector were in the majority. Infectious pathology was predominant with 52.10% of cases in 54.70% of men. Ouoba *et al.* [5] found a male predominance of 61.54%. In Brazil, Veronez *et al.* [7] found a male predominance of 53.50%. Male patients had a greater propensity for facial and neck trauma, which could lead to an exacerbation of chronic processes. They also generally had worse hygiene conditions than female patients, in addition to the fact that men more often neglected minor infections of the mouth and face. Lack of hygiene would therefore be incriminated in the male predominance of infectious pathology. It represented 26.40% of all pathologies in our study related to road traffic accidents [8]. On the other hand, in developed countries, the etiologies are dominated by brawls. [9]. The age group of 20 - 40 years was predominant with 44.35% of all cases in our study. There was a male predominance at 59.96%. The occurrence of maxillofacial trauma was strongly correlated with age; the prerogative of young adult men. Obiri-Yeboah *et al.* in Ghana with the age group of 21 - 30 years [10]. The informal sector was predominant with 43.89% of all trauma pathology. There was a correlation between trauma and profession in our study (p = 0.003). Tumor pathology represented 9.50%. The age group of 20 - 40 years was the most represented, at 28.04%. The male gender was predominant at 74.49%. Abdennour *et al.* [11] reported a female predominance of 52%. Thirty-five point four percent of patients with a tumor had epulis and 22.40% had ameloblastoma. Indeed, Adam *et al.* [12] reported a prevalence of 0.90% of epulis. The low prevalence of epulis was due to the exclusion of a large proportion of incomplete files. Failure to comply with oral hygiene measures and the resulting dental caries, the installation of an unsuitable

appliance after the extraction of an affected tooth would be among the etiological factors incriminated in the occurrence of epulis [13]. Squamous cell carcinoma, on the other hand, was predominant in 62.50%. The main risk factor was chronic alcohol and tobacco intoxication. Chronic irritation that could be caused by an ill-fitting hook of a removable dental prosthesis could be the triggering factor. Six point four percent of patients presented with a malformative pathology. There was a female predominance at 59.16%. These underestimated figures could be explained by the fact that these malformations are often treated by non-governmental organizations during humanitarian surgical intervention campaigns. Orofacial clefts predominated the malformative pathology with 56.50%. In Niger, according to a study on treated cleft lip and palate, 12% of patients presented with a cleft lip and palate [14]. The prevalence of orofacial clefts would be linked to geographical location, ethnicity and even economic status. However, according to Longombe *et al.*, the etiology would be more related to environmental factors than genetic [15]. DAM represented 5.60% of all maxillofacial pathology in our study. The female sex predominated at 56.90%, with a statistically significant correlation between sex and DAM. A study of 100 cases of DAM reported a female predominance of 64% [16]. The disease is thought to preferentially affect women, young adults, and those suffering from stress or depression. Etiological investigations should focus on biological and psychosocial factors, which are more common in female patients.

5. Conclusion

We conducted a descriptive retrospective study over a period of 8 years. This study allowed us to investigate factors associated with the occurrence of maxillofacial and stomatological pathologies at the SO University Hospital. It therefore appears that maxillofacial and stomatological pathologies are not rare conditions in Togo. They are the prerogative of young male adults. Among the pathologies, dental cellulitis, facial trauma and orbitozygomatic fractures, epulis and ameloblastoma, facial clefts, and DAM were the most common. Age, sex, and occupation were the main factors correlated with the occurrence of these different pathologies.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

[1] ISNI. Chirurgie maxillo-faciale. https://isni.fr/des/chirurgie-maxillo-faciale

[2] Essobiyou, T.B., Adam, S., Dargani, M.F., Boko, S.U.R., Ananidjin, G., Keheou, A.P., *et al.* (2022) Mandibular Fracture in a Regional Area: About 109 Cases in Togo. *Advances in Oral and Maxillofacial Surgery*, **8**, Article ID: 100365. https://doi.org/10.1016/j.adoms.2022.100365

[3] Kpemissi, E., Amana, B. and Tchandana, K. (2009) Mandibular Tumours: Epidemiology, Diagnostic and Therapeutic Aspects Concerning 91 Cases. *Le Mali Medical*, **24**, 47-52.

[4] Wiliam, O. (2019) L'ong Smile Train offre une prise en charge gratuite des fentes labio-palatines au Togo. https://sante-education.tg/fr/article/713/l-ong-smile-train-offre-une-prise-en-charge-gratuite-des-fentes-labio-palatines-au-togo

[5] Ouoba, K., Ouedraogo, D. and Ganebang, P. (2012) Pathologie stomatologique et chirurgie maxillo-faciale en pratique privée dans la ville de Ouagadougou: À propos de 385 cas. Université de Ouagadougou.

[6] Boffano, P., Kommers, S.C., Karagozoglu, K.H. and Forouzanfar, T. (2014) Aetiology of Maxillofacial Fractures: A Review of Published Studies during the Last 30 Years. *British Journal of Oral and Maxillofacial Surgery*, **52**, 901-906. https://doi.org/10.1016/j.bjoms.2014.08.007

[7] Veronez, B., Matos, F.P.d., Monnazzi, M.S., Sverzut, A.T., Sverzut, C.E. and Trivellato, A.E. (2014) Maxillofacial Infection. A Retrospective Evaluation of Eight Years. *Brazilian Journal of Oral Sciences*, **13**, 98-103. https://doi.org/10.1590/1677-3225v13n2a04

[8] Adeleke, A.I., Hlongwa, M., Makhunga, S. and Ginindza, T.G. (2023) Epidemiology of Maxillofacial Injury among Adults in Sub-Saharan Africa: A Scoping Review. *Injury Epidemiology*, **10**, Article No. 58. https://doi.org/10.1186/s40621-023-00470-5

[9] Pabbati, S., Thomson, P. and Sharma, D. (2024) The Aetiology of Maxillofacial Trauma in Australia: A Scoping Review. *Australian Dental Journal*, **8**, 55-64.

[10] Obiri-Yeboah, S., Larmie, R.N.L., Ampem Gyimah, N.T., Acheampong, A.O., Asomaoh, E. and Donkor, P. (2021) Maxillofacial Injuries at the Komfo Anokye Teaching Hospital, Kumasi, Ghana: A Preliminary Study. *Open Journal of Stomatology*, **11**, 133-147. https://doi.org/10.4236/ojst.2021.113011

[11] Abdennour, S. and Benhalima, H. (2013) Benign Odontogenic Tumours: Epidemiological Analysis of 97 Cases in the Algerian Population. *Revue de Stomatologie, de Chirurgie Maxillo-faciale et de Chirurgie Orale*, **114**, 67-71. https://doi.org/10.1016/j.revsto.2013.01.014

[12] Adam, S., Sama, H.D., Agoda, P., Bissa, H., Foma, W., Pegbessou, E.P., *et al.* (2019) Epidemiological, Clinical and Therapeutic Issues of Epulis at Campus University Teaching Hospital of Lomé: About 33 Cases. *Open Journal of Stomatology*, **9**, 168-174. https://doi.org/10.4236/ojst.2019.97017

[13] Agbaje, H.O., Kolawole, K.A., Folayan, M.O., Onyejaka, N.K., Oziegbe, E.O., Oyedele, T.A., *et al.* (2016) Digit Sucking, Age, Sex, and Socioeconomic Status as Determinants of Oral Hygiene Status and Gingival Health of Children in Suburban Nigeria. *Journal of Periodontology*, **87**, 1047-1056. https://doi.org/10.1902/jop.2016.150681

[14] Moussa, M., Kaka, H.A. and Roufai, L. (2020) Les fentes labio-palatines au Niger: Aspects épidémiologiques, cliniques, thérapeutiques et évolutifs à propos de 285 cas. *Health Sciences and Disease*, **21**, 18-22.

[15] Longombe, A.O. and Tshimbila Kabangu, J.M.V. (2012) Les fentes labiopalatines à l'est de la République Démocratique du Congo. Aspects épidémiologiques. *Annales de Chirurgie Plastique Esthétique*, **57**, 245-249. https://doi.org/10.1016/j.anplas.2012.02.012

[16] Yousfi, K. (2022) Epidémiologie des atteintes occluso-articulaires de l'appareil manducateur: À propos de 100 cas. *La Revue Médicale de l'HMRUO*, **9**, 52-58.