The Trend of Paediatric Orofacial Malignancies in an African Population: A Multicenter Study

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ABSTRACT

Objective: Most documented reports on pediatric orofacial malignancies are single institution based and are fraught with discrepancies. Therefore, they do not adequately describe the regional silhouette of orofacial disease burden; hence our multicenter study aims to determine the socio-demographics of paediatric orofacial malignancies and assess the prevailing trend and patterns.

Methods: A cross-sectional retrospective study involving the medical records, surgical biopsy day books, and surgical operations inventory of the involved teaching hospitals and training centers. All centers involved are tertiary institutions which involved departments comprising the Oral pathology, maxillofacial surgery, and paediatric dentistry units of Lagos State College of Medicine, University of Lagos, University College Hospital, Obafemi Awolowo University, and Babcock University. These are domiciled in the South-Western axis of the country. Information on socio-demographic data and clinical parameters was retrieved and analyzed. All complete documented cases within the study years were utilized.

Results: 72 orofacial malignancies were found in all paediatric age groups from 2008-2018 with an F: M ratio of 1.1:1 and a mean age of 9.5 years. The 13-16 age group had the highest prevalence at 31.9%. The mandible was the most involved primary site and the mean duration of paediatric malignancies before presentations was 5.3 months. Sarcomas accounted for 47.2% of all the documented paediatric malignancies, followed by lymphomas.

Conclusion: There seems to be a change in the prevalence of pediatric orofacial malignancies (POMS) across the decades, with the most obvious rates observed in decreasing incidence of lymphomas in oral maxillofacial clinics but a steady rise in sarcomas.

Keywords: Paediatric malignancies, sarcomas, lymphomas, orofacial

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INTRODUCTION

Childhood malignancy is considered the fourth most common cause of death in the paediatric population and evaluation of the incidence, trend and patterns of common paediatric orofacial malignancies(POM) has raised concerns that they may be on the rise.[1,2] Reports from studies among black African populations also show an increasing incidence of Orofacial malignancy (OM).[2] Considering other factors which plague access to appropriate treatment in some parts of the African continent, such as availability, accessibility and affordability of treatment, little wonder why morbidity and mortality are still very high even with advances in global treatment modalities.[2] Other factors, such as ignorance, superstitious and religious beliefs on the part of parents and guardians retard and impede early healthcare-seeking behaviour, which has also contributed to the high mortality reported in this region.[3]

Orofacial malignancies (OM) involve the lip, oral mucosa, tongue, palate, floor of the mouth, gingivae and other unspecified parts of the oral cavity. Other structures classically involved include the maxilla, mandible, other facial skeleton and face, facial skin, its skeleton and salivary glands.[4] Paediatric Orofacial malignancy (POM) consists of a broad range of orofacial malignant tumours seen worldwide in childhood. However, it is essential to note that significant disparity exists in the age bracket of childhood. This is evidenced by the various cut-off points employed by different researchers to describe the paediatric group, typically with ranges between 15 to 20 years for paediatric patients[5]

Unlike in adults, where lifestyle-related risk factors are believed to play a major role, genetic-environmental factor interaction is the key factor implicated for childhood malignancies.[6,7] Environmental factors such as ionizing and non-ionizing radiation, infections and chemical exposure have been linked to different childhood malignancies.[8] Exposure to accidental and therapeutic irradiation in utero or early childhood has been linked to many childhood cancers.[1] Non-ionizing radiation in the form of electromagnetic fields and ultraviolet irradiation has also been implicated in leukaemia and melanoma.[9] Infections are significant etiologic factors in Africa, where Epstein Barr virus infection has been implicated in the Endemic type of Burkitt's lymphoma, Hodgkin's lymphoma and nasopharyngeal carcinoma.[10,11] Human Immunodeficiency Virus (HIV)[10] and Human Herpes Virus 8[12] have also been implicated with Kaposi sarcoma. Chemicals such as; high levels of lead, benzene, pesticides and even medications taken during pregnancy by the mother have also been identified as etiologic agents.[13]

Some known aetiological factors in paediatric OM are modifiable. Interventions, such as improved funding to control malaria in Africa,[14] prevention and management of HIV infection, and improvements in the standard of living brought about by policies that impact the populace positively – can go a long way in managing some of these cancers.[15]

Malignancies are more likely to respond to effective treatment, resulting in a greater probability of survival when identified early.[16] Thus, early diagnosis is vital to prevent life-threatening complications and improve treatment outcomes in cancer management. However, delay and late presentation for treatment are still common in many children with POM in Africa.[17] Lack of awareness, ignorance and poverty are mostly responsible for late presentation for treatment, and this has been linked to high mortality and poor treatment outcome in patients.[18]

Classification of POMs can follow the same pattern for adults, where malignancies are classified based on tissue of origin. Malignancies can arise from the surface/lining epithelia, fibrous connective tissue, muscular, neural, endothelial, odontogenic, bony, lymphoid and salivary gland tissues that comprise the orofacial structure.

A review of several earlier studies on POM in the region revealed a pattern of predominance of lymphomas,[8,19] with Burkitt's lymphoma being the most common malignancy, although discrepancies exist in the order of prevalence of other categories of malignancies. Adisa et al.,[20]s in their study of POMs between 1999 and 2008, observed that lymphomas were the commonest malignancies accounting for 49.5% of their study population, followed by epithelial malignancies (25.7%); Sarcomas were the least occurring. Burkitt's lymphoma (25.7%) was the most common POM, followed by embryonal rhabdomyosarcoma (16.8%), squamous cell carcinoma, and non-Hodgkin's lymphoma only accounted for 14.8% and 13.9% respectively. They observed a male predominance at a male-to-female ratio of 1.7:1. Nasopharynx was the most affected site, followed by the mandible in their study. Earlier reports by Adeyemi et al[21] from the same institution also recorded a predominance of haematolymphoid tumours, followed by sarcomas. Reports from other institutions in the region by Omoregie et al.,[22]

Aregbesola et al.,[19] Ajayi et al.[8] consistently reported predominance of lymphomas with Burkitt's lymphoma being the commonest tumour and male predominance, however with variations existing in the occurrence of the other malignancies and site distribution of the POMs. All these studies are single institution based, indicating an obvious need for a comprehensive and effective cancer registry with a reliable database. In the absence of this, this multicentre study conducted in five big Nigerian tertiary institutions in South-western Nigeria has tried to bridge that gap. These hospitals serve the health needs of about 32.5 million people in South-western Nigeria. This multicentre study has sought to assess the socio-demographics, as well as identify the prevailing trend and pattern of distribution of POMs in this African population over the 11-year study period.

MATERIALS AND METHODS

Biopsy records, surgical day books and patient registers of all histopathologically diagnosed lesions amongst paediatric patients seen at the Teaching Hospital Complexes of Obafemi Awolowo University Teaching Hospital Complexes, Ile-Ife (OAUTHCI), University College Hospital(UCH), Ibadan, Lagos University Teaching Hospital, Idi-Araba Lagos (LUTH), Lagos State University College of Medicine (LASUCOM) and Babcock University Teaching Hospital, Ilisan-Remo between January 2008 and December 2018 were retrieved and analyzed. All clinical diagnoses were corroborated with their histopathological diagnosis (the gold standard of diagnosis), and in some cases some were re-confirmed with adjunctive pathological techniques. For those whose histopathologic diagnosis was unavailable or at variance with the working diagnosis, they were expunged from the data. Immunohistochemical analysis was performed when routine haematoxylin-eosin staining was insufficient to establish the lesions' final diagnosis.

Record of paediatric dental lesions in General Out-Patient Diagnosis clinics and General Pathology Unit within the study time were also perused for inclusion. WHO (2017) Classification of Head and Neck Tumours[23] was used for the nomenclature of all included paediatric lesions. Information on demographic data and clinical parameters, including age, gender, site, and duration of the lesion before presentation, associated symptoms and progression, were recorded and analysed retrospectively, ditto histopathologic diagnoses and categories of lesions. The total number of lesions was recorded; each sub-category per year from 2008 to 2018 was also recorded and analysed to determine trends and patterns of paediatric lesions. All information was entered into a database by a single researcher.

The paediatric age group was further stratified to determine the distribution of these lesions amidst subgroups viz subgroups of 4 years each into 0-4 years, 5-8 years, 9-12 years and 13-16 years. Regarding site distribution, the oral regions were divided into maxilla (excluding the palate), mandible, lymph nodes, salivary glands, palate, oral mucosa (excluding the tongue) and the tongue. Possible simultaneous involvements of sites were also taken into context. Malignant paediatric lesions were sub-classified into carcinomas, sarcomas and lymphomas.

The data were analysed using Stata 14 (StataCorp College Station, Texas). Descriptive statistics were performed for socio-demographic variables such as age, gender, location of tumour and prevalence of the lesions; the absolute and relative frequencies were obtained and expressed as percentages. Means and standard deviations were used for continuous variables, while proportions and tables were used for categorical variables. Analysis of each diagnosis entailed: the number of samples, male: female ratio, age range, mean age and standard deviation. These data were analysed and reported in tabular and graphical formats to evaluate changes in trends in the past 10 years.

The t-test and ANOVA were used to compare differences in age; this was after the Shapiro-Wilk and Levene tests had been used to confirm the normality of data and homogeneity of variance, respectively. The Chi-square test was used to compare the proportion of the different types of POMs across the age groups, locations and histologic parameters. All tests were carried out with significance accepted at $p < 0.05$.

RESULTS

Prevalence of paediatric orofacial malignancies

Seventy-two orofacial malignancies were found in all age groups from 0- 16 years from 2008 to 2018 (Table 1). These 72 cases consist of 13 cases from OAUTH, 12 cases from UCH, 13 cases from LUTH, 22 cases from LASUCOM, and 10 cases from Babcock University Teaching Hospital. From this number, 2012 had the highest presentation of paediatric malignancies (n=11, 15.3%), while 2013 presented with the least number of lesions (n=3, 4.2%) [Figure 1]. There was a normal distribution of cases through the other years (Figure 2). There was a female-to-

male ratio of 1.1:1, with females constituting 52.8 %(n=38) of all cases and 34 males (47.2%), the mean age of presentation being 9.46 ± 4.78 (median age of 10 years) (Table 1).

Table 1. Socio-demographic Characteristics of Study Group

Variables	Freq.	Percent (%)
2008	7	9.7
2009	6	8.3
2010	4	8.3
2011	4	5.6
2012	11	15.3
2013	3	4.2
2014	4	5.6
2015	7	9.7
2016	9	12.5
2017	8	11.1
2018	7	9.7
	72	100
GENDER (n=72)		
Male	34	47.2
Female	38	52.8
AGE (GROUPS)		
0-4 years	17	23.6
5-8 years	14	19.4
9-12 years	18	25.0
13-16 years	23	31.9
SITE		
Mandible	25	34.7
Maxilla	24	33.3
Oral Mucosa	6	8.3
Lymph Nodes	5	6.9
Salivary Glands	5	6.9
Palate	4	5.6
Tongue	3	4.2

Age and gender relationship

The age group 13-16 years had the highest prevalence at 31.9% (n=23), followed by 9-12 years (n=18, 25%); 5-8 years (n=14, 19.4%) presented the least incidence. Despite its slight female overall prevalence, age groups 0-4 years and 5-8 years had a slight male prevalence of 52.9% (n=9) and 57.1% (n=8), respectively. However, age groups 9-12 and 13-16 showed a strong female predilection at 61.11% and 56.5%, respectively. This was not statistically significant across gender and age groups. The mean ages for both genders also differed with a mean age of 8.97 years ± 4.7years for the males and 9.9 years ± 4.9 years for the females with a p-value of 0.36 (not significant).

Anatomic primary site in relation to gender and age

The mandible was the most commonly involved primary site (n=25, 34.7%), followed by the maxilla (n=24, 33.3%), while the tongue was the least involved site with a prevalence of 4.25% (n=3). Of all maxillary malignancies, 70.8% (n=17) presented in the females, while 64% (n=16) of all mandibular lesions occurred in the males. Likewise, 47.1% of all the malignancies affecting the male patients occurred in the mandible, while 44.7% of all malignancies involving the female patients involved the maxilla. The mandible and maxilla were the most commonly involved anatomic sites in all the age groups. The highest mean age of presentation was observed within malignancies affecting the lymph nodes and tongue at 12.8 ± 3.6 years and 12 ± 5.2 years respectively. Palatal involvement presented the least mean age of 6.8 ± 3.8 years. In general, there were 10 observed primary sites; the buccal mucosa, labial mucosa and floor of the mouth were classified together as oral mucosae.

Duration before presentation

The mean duration of paediatric malignancies before presentation was observed to be 5.3 months ± 3.9 months with a median duration of 4 months. This, however, varies by the anatomic site from 2.3 months in the tongue to 5.8 months in the maxilla and 8.8 months for malignancies involving the salivary glands. The mean duration in females was observed to be 5.6 months ± 3.9 as against 4.9 months ± 4 for males; this was not statistically significant.

Characteristics and distribution of malignancies

Sarcomas accounted for 47.2% of all the documented paediatric malignancies (n=34), followed by lymphomas which accounted for 29.2 % (n=21). Carcinomas had the least prevalence at 23.6% (Table 2). Carcinomas, however, exhibited the highest mean duration before presentation at 6.4 months ± 4.6 while patients with lymphomas exhibited a mean duration of 3.9 ± 2.9 months before presentation. Maxilla was the most common anatomic site observed in carcinomas (35.5%), while the mandible was the most prevalent site in both sarcomas and lymphomas, with 41.2% and 38.1%, respectively. There was an observed female prevalence across the three categories of malignancies. The highest occurrence of sarcomas was observed amongst the age groups of 0-4 years and 13- 16 years, accounting for 58.8% of all malignancies in the 0-4-year group and 43.5 % in the 13-16year group. Meanwhile, 52.9%

of all carcinoma cases occurred in the 13-16-year age group, while the incidence of lymphomas was fairly evenly distributed across the age groups. The mean age of presentation also varied widely across the categories, with a mean age of 8.3 years ± 4.6 for lymphomas and 12 years ± 4.4 years for carcinomas with a significant p-value of 0.03. (Table 3)

Table 2. Categories of Lesions and Orofacial Malignancies (OM)

Categories (n, %)	Malignancy	Frequency (%)
Sarcomas (34, 47.2)	Rhabdomyosarcoma	22 (30.6)
	Pleomorphic sarcomas	5 (6.9)
	Osteosarcoma	4 (5.6)
	Other Sarcomas*	3 (4.2)
Lymphomas (21, 29.2)	Burkitt's Lymphoma	13 (18.1)
	Other types of Non- Hodgkin's Lymphoma **	7 (9.72)
	Hodgkin's Lymphoma	1 (1.39)
Carcinomas (17, 23.6)	Mucoepidermoid Carcinoma	6 (8.3)
	Oral Squamous Cell Carcinoma	4 (5.6)
	Ameloblastic Carcinoma	3 (4.2)
	Adenoid Cystic Carcinoma	3 (4.2)
	Carcinoma Ex-Pleomorphic Adenoma	1 (1.39)
TOTAL (72, 100)		72 (100)

**Chondrosarcomas (2) and Ewing's Sarcoma (1)*

***Diffuse large B-cell lymphoma (3), Lymphoblastic lymphoma (1), Small lymphocytic lymphoma (2)*

Sarcomas

Sarcomas were the most common oral malignancies encountered in this study. Rhabdomyosarcoma accounted for 64.7% (n=22) of the sarcomas, followed by undifferentiated pleomorphic sarcomas (including fibrosarcomas and malignant fibrous histiocytoma). Other sarcoma cases included osteosarcomas (n=4). Rhabdomyosarcomas was also the most commonly reported paediatric malignancy in this study (n=22, 30.6%); embryonal rhabdomyosarcoma was the most common subtype (n=14) (Table 2).

Lymphomas

Burkitt lymphoma accounted for 61.9% (n=13) of all lymphoma cases and 65% of the cases of non-Hodgkin's lymphoma. There was only one documented case of Hodgkin's lymphoma in our present study. Other Non-Hodgkin's lymphoma cases include diffuse small cell lymphomas (n=2) and diffuse lymphocytic/histiocytic non-Hodgkin's lymphoma (n=2). Burkitt lymphoma also accounted for 18.1% of all the observed paediatric malignancies, second only to rhabdomyosarcomas. (Table 2)

Carcinomas

Carcinomas only accounted for 23.6% (n=17) of all the paediatric malignancies in this study, with salivary adenocarcinomas accounting for 58.8% of all the carcinomas (mucoepidermoid carcinoma (n=6, 35.5%), adenoid cystic carcinomas (n=3, 17.6%) and carcinoma ex-pleomorphic adenoma (n=1, 5.9%). Oral squamous cell carcinomas accounted for only 23.5% (n=4) of the carcinomas. (Table 2)

Table 3. Distribution of Categories across Gender, Age Groups and Site

	Carcinomas	Sarcomas	Lymphomas	Total
GENDER^{NS}(p=1.0)				
Male	8(23.5)	16(47.1)	10(29.4)	34(47.2)
Female	9(23.7)	18(47.4)	11(28.9)	38(52.8)
AGE GROUP^{NS}(p=0.4)				
0-4years	2(11.8)	10(58.8)	5(29.4)	17(23.6)
5-8 years	2(14.3)	6(42.9)	6(42.9)	14(19.4)
9-12 years	4(22.2)	8(44.4)	6(33.3)	18(25.0)
13-16years	9(39.1)	10(43.5)	4(17.4)	23(32.0)
MEAN AGE^{S} (p=0.03)	12 ± 4.4	8.9 ± 4.7	8.3 ± 4.6	Ca vs Sar** Ca vs Lym* Lym vs Sar^{-}
SITE^{NS} (p=0.14)				
Maxilla	6(25.0)	12(50.0)	6(25.0)	24(33.3)
Mandible	3(12.0)	14(56.0)	8(32.0)	25(34.7)
Lymph Nodes	1(20.0)	0(0.0)	4(80.0)	5(6.9)
Oral mucosa	1(16.7)	3(50.0)	2(33.3)	6(8.3)
Tongue	1(33.3)	2(66.7)	0(0.0)	3(4.2)
Sal. Glands	3(60.0)	2(40.0)	0(0.0)	5(6.9)
Palate	2(50.0)	1(25.0)	1(25.0)	4(5.6)

^{S} Statistical Significance, ^{NS} Nil Statistical Significance, ** Post-Hoc Tukey Very Significant
* Post-Hoc Tukey Significant, $^{-}$ Post-Hoc Tukey Nil Significance, *Ca – Carcinomas, *Sar – Sarcomas, *Lym - Lymphomas

Figure 1. Time Analysis of Paediatric Malignancies

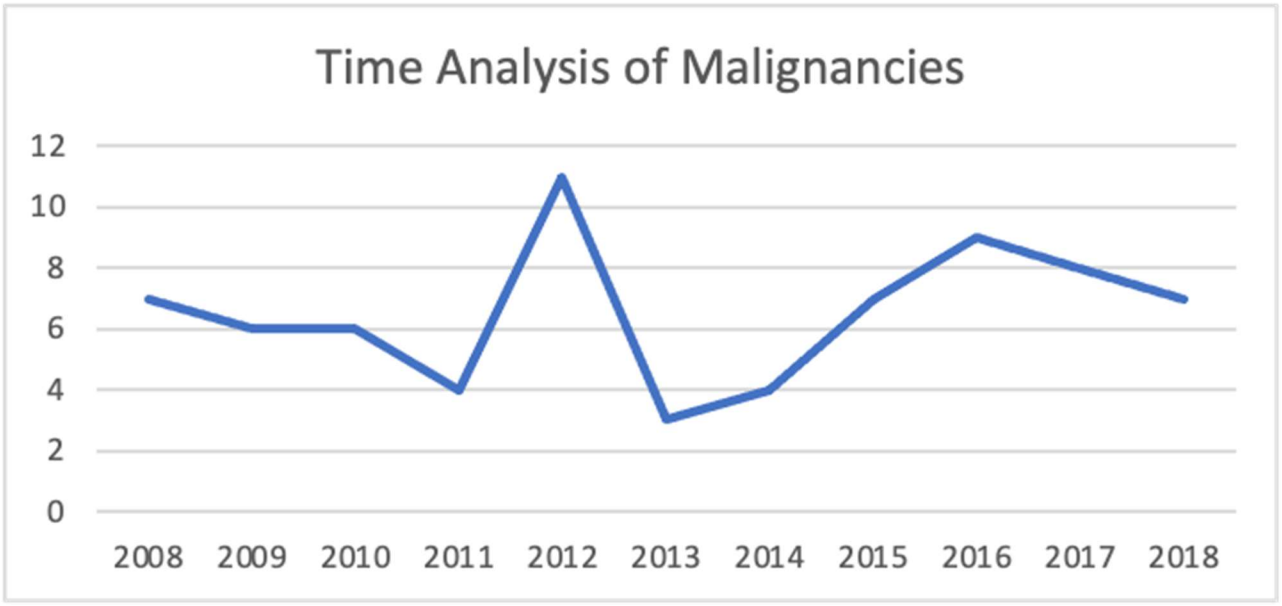
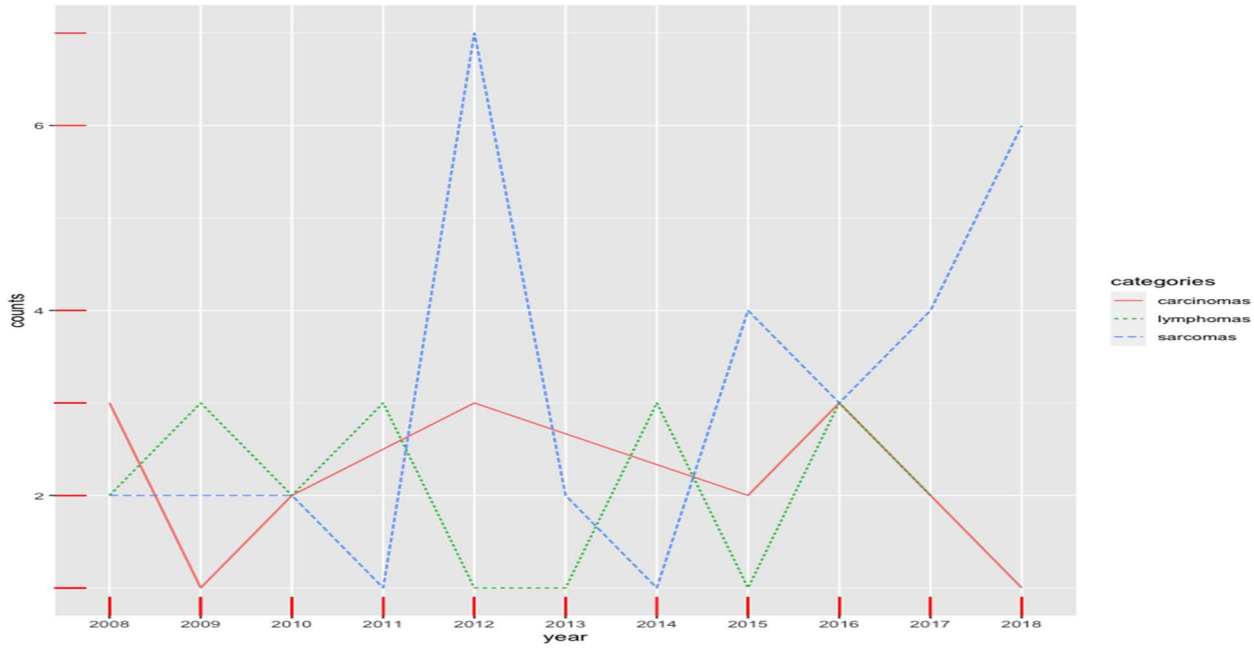


Figure 2. Patterns of Presentation Through the 2008 - 2016



DISCUSSION

The causes of most paediatric malignant diseases remain equivocal and poorly studied,[5] however, there is a higher tendency for malignancies in this group to be due to genetic alterations than in adulthood.[6,7] In similitude with adult cancers, paediatric malignancies also traverse a wide spectrum, from oral squamous cell carcinomas to lymphomas and salivary gland lesions. Geographic variations of cancers and associations with microorganisms, environmental pollutants, teratogens and intrauterine defects have all been implicated in paediatric malignancies.[24] Not regarding the group of lesions, prevalence of paediatric oral lesions has been reported to be between 5 and 8%[5] and from 6.6%[25] to over 20.6%[26] of all histopathological specimens. Despite the higher prevalence of soft tissue mucosal lesions and benign neoplasms in most documented literature,[17,27–29] few African studies[8,20] have reported a preponderance of malignant lesions in this age group, with Burkitt's lymphoma the most common malignancy within this age group.[22] Other African studies[19,28] have reported benign lesions to be much more common. In general, studies on the epidemiology of oral lesions in the paediatric age group are still relatively sparse in the literature.

A slight female prevalence (52.8%) was observed in our study, in tandem with the studies of Zuniga et al.,[30] Ataide,[26] and Pessoa et al.,[31] while a male preponderance was reported by other authors.[22] Silva et al. , however, reported no gender predilection. Gender predilection for different categories of POMs were also observed in the studies of Piloni et al. [11]where they reported a male predilection in sarcomas and lymphomas. In our study, there was a female preponderance across all the categories. Despite this slight difference in prevalence, a male predilection was considerable between the 0-4 years and 5-8 years bracket, while a female preponderance was observed in the preadolescent age group. POMs were more commonly observed in the 13-16 in this study, as earlier reported by other authors.[11,19] The "female preponderance" is, however, in stark contrast to the earlier Nigerian studies of Ajayi et al. [8,19] and Aregbesola et al. [19] who reported a high male prevalence of 2.5- 3:1; albeit, both studies were single centre studies. Our study observed a mandibular predilection for POMS (34.7%) followed by the maxilla (33.3%) as commonly encountered sites. A mandibular predilection was also reported in the studies of Piloni et al[11] and Wang et al[25] while the studies of Ajayi et al[8], Omoregie et al[22] and Aregbesola[19] reported the maxilla to be most commonly affected site in POMs. The mandibular predilection is our study in contrast to the maxillary predilection in other Nigerian studies of Ajayi et al[8], Aregbesola et al[19] and Omoregie et al[22] may arise due to our study being a multi-centre study and pooling

samples from more tertiary institutions than the single centre studies of these acclaimed authors.

Sarcomas were the most encountered orofacial neoplasms (47.2%), followed by lymphomas (29.2%). This is similar to reports by Piloni et al. [11] but discrepant from those reported by most authors, who reported a marked prevalence of lymphomas[19,22,33]. Although osteosarcomas are the most common primary bone neoplasms (asides from multiple myeloma), gnathic osteosarcomas present one or two decades earlier than their lower extremities counterparts, making them rare before the age of 30 within the jaws. Rhabdomyosarcomas (RMS), the most common soft tissue sarcomas, are prevalent in children, teenagers and young adults, with peak occurrence between 2 and 6 years.[34,35] They account for 3-4% of all childhood cancers. Therefore, rhabdomyosarcomas are the most commonly observed sarcoma in paediatric patients, most importantly, the embryonal subtype.[34,35] However, unlike reported predilection for palate in literature,[35] the maxilla is the most common site for rhabdomyosarcoma in our study. Head and neck RMS account for 36% of these tumours, with further subdivision into orbital and non-orbital types; a higher prevalence was found in the orbital region. In this study, however, oral RMS accounted for 32% (n=8) of the total cases within the mandible. This considerable proportion of mandibular RMS is remarkable as the mandible is not a recognized site of occurrence of RMS. We hypothesize that increased mandibular RMS in this study may be due to misdiagnosis especially as RMS is one of the common differentials for small round blue cell lesions. Hence, immunohistochemistry might be suggested as a routine ancillary tool in its confirmatory diagnosis. A noticeable mandibular predilection was also reported by Arya et al.[34] Fibrosarcoma in contrast was the most reported sarcoma in other documented studies. Ajayi et al[8] documented similar prevalence of both fibrosarcoma and RMS. Undifferentiated pleomorphic sarcoma (including fibrosarcoma) was the second most common sarcoma in our study.

The decreasing prevalence of Burkitt's lymphoma could be the cause of the reduced prevalence of lymphomas as shown in Figure 2. There is also an increased likelihood that more lymphoma patients are presenting more in specialist haemato-oncology clinics than in maxillofacial clinics. Earlier Nigerian studies by Omoregie et al. [22] and Aregbesola et al. [19] reported Burkitt's lymphoma as the most common POM. However, as Soyele et al. [28] noted, a gradual shift in the referral of Burkitt's lymphoma cases to the haemato-oncology unit in respective centres may have gradually culminated in their reduced presentation in these maxillofacial centres. This is the case in most of the maxillofacial centres in this study; hence, this could explain the reduced prevalence of Burkitt's lymphoma in our study. It is also pertinent to state that the earlier studies were all conducted before this last decade. A steep decline in Burkitt's cases was observed following 2014 as shown in Figure 3. The prevalence of Burkitt's lymphoma in African studies has been ascribed to its endemicity in Africa, with the highest prevalence reported in Eastern African studies.[33]

Carcinomas are rare in the paediatric age group and have been reported to be etiologically distinct from the carcinomas in the older age group[7] Carcinomas presented with the least prevalence in most epidemiological studies.[8,11,19] This is equally the trend in our study, with carcinomas accounting for about 23.6%. Paediatric OSCCs have been associated with genetic syndromes such as Fanconi Anaemia(FA), xeroderma pigmentosum(XP), keratosis- ichthyosis-deafness (KID) syndrome as the usual risk factors (tobacco and alcohol exposure) are typically absent.[6,7] OSCCs accounted for 23.5% of the carcinomas and only 9.7% of all POMs in this study; however, Modh et al. [6] reported a rising prevalence in paediatric OSCC cases in their study. We also observed a slight progressive increase from 2014 in the burden of paediatric OSCC. A steep rise in the prevalence of daily smoking amongst teenagers from 8% to an alarming 22%, may be the most plausible reason for the rising trend.[37] Salivary gland adenocarcinomas accounted for the highest proportion of carcinomas with a predilection for the 13-16 years age group. As commonly reported,[35,37] mucoepidermoid carcinoma is also the most common histologic subtype in our study. Despite the

rarity of adenocarcinomas in the paediatric age group, the histological grading is usually well or moderately differentiated.[37] Well-differentiated histologic grading was the most commonly observed type in our study.

CONCLUSION

In this study, a slight female predilection of the paediatric orofacial malignancies was observed, which is comparable to previous studies. The mandible was the most commonly affected site, and sarcomas were the most prevalent malignancies found. There seems to be a change in the prevalence of POMS across the paediatric age groups, with the most obvious decrease in the presentation of Burkitt's lymphoma in oral maxillofacial clinics. In contrast to the observed decreasing incidence of lymphomas, sarcomas have progressively increased in prevalence amongst the paediatric age groups, with the highest prevalence recorded in the last year of inclusion in the study. This increase may be due to increased awareness and utilization of health services that predicated this relative increase. Carcinomas, however, followed an equivocal trend with varying yearly rates. There is a progressive increase in the incidence of paediatric OSCC, possibly due to the increased participation of teenagers in smoking and alcohol use.

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None declared

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