SURGICAL PATHOLOGY

Oral Tumours In Zaria

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ABSTRACT

Oral tumours are common worldwide and are attributed to factors like tobacco smoke, ill-fitting dentures, alcohol, and syphilis. Viruses like HPV and HIV play an important role in some premalignant conditions like leukoplakia. This is a retrospective analysis of 210 oral tumours see at the Pathology department of the ABUTH, Zaria from 1987 – 1996. There were 54 benign and 156 malignant tumours. The benign oral tumours were made up of 12 squamous cell papillomas; 11 haemangiomas; 7 fibromas; 6 myxomas; 5 lipomas; 4 neurofibromas; and 11 unclassified lesions. The M:F ratio was 1:1.1 for benign tumours. The malignant tumours were made up of 115 squamous cell carcinomas; 6 fibrosarcomas; 4 malignant melanomas; 2 heamangiopericytomas; and 27 unclassified malignant lesions. The M:F ratio was 2.3:1 for malignant tumours. It is concluded that squamous cell carcinoma is the commonest oral neoplasm seen in Zaria and it occurs at a younger age than is seen in more developed western countries ***(Nig J Surg Res 2000; 2: 21-25)***

KEY WORDS: Oral tumours; Squamous cell carcinoma; Fibrosarcoma; Papilloma; Heamangioma; Human papilloma virus

Introduction

Tumours of the oral cavity may arise from any of its soft tissue components, usually the squamous lining epithelium of the upper and lower lips, tongue, palate, and floor of the mouth; the supporting soft tissues like muscles, fat, nerves, and blood vessels; or the minor salivary glands. The benign tumours include papillomas, haemangiomas, lipomas, neuromas, and myxomas. The malignant oral tumours include squamous cell carcinomas, malignant melanomas, heamangiopericytomas, and lymphomas. Most of these tumours share the same histological appearances to those found elsewhere in the body.

Aetiological factors implicated in the causation of oral tumours are tobacco smoke, ill-fitting dentures, alcohol, syphilis, aerodental factors (like cracked and mal-aligned teeth, leukoplakia, etc), dietary deficiencies, chronic candidiasis, viruses and sunlight.[1-8] Infectious agents like human papiloma virus (HPV) (serotype 16) and human immunodeficiency virus (HIV) are also important contributors to precancerous conditions like hairy leukoplakia although their relationship to oral cancer is debatable.[1-9]

Heamangiomas are common in the oral cavity and are considered by many to be harmatomas rather than neoplasms.[10,11] Several clinical studies on oral tumours have been published from Zaria .[12-14] This is a report of the histological pattern of oral tumours in Zaria.

Materials and Method

The study reviewed all surgical pathology specimens of oral tumours sent to the Pathology department of Ahmadu Bello University Teaching Hospital (ABUTH), Zaria during the period 1987 - 1996. Most of the cases originate from Ahmadu Bello University Teaching

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Hospitals situated in Kaduna and Zaria, while others are from other public and private hospitals within the catchment area of the ABUTH. The clinical details, age, sex and site were extracted from the patients' request cards. The routine haematoxylin and eosin (HE) stained slides were reviewed, and where necessary, fresh sections were cut and stained with HE from tissue blocks. Special histochemical stains like reticulin stain and periodic acid -schiff (PAS) to demonstrate reticulin network and mucin respectively were used in some cases. The tumours were classified according to World Health Organization International Histological Classification for Oral tumours.[15]

Results

The 210 oral tumours studied formed 3.3% of all the neoplasms seen in the department during the review period. Fifty-six (26.7%) were benign and 154 (73.3%) malignant (Tables 1and 3). There was an overall M:F ratio of 1.8:1.The benign tumours were made up of 12 squamous cell papillomas; 11 haemangiomas; 7 fibromas; 6 myxomas; 5 lipomas; 4 neurofibromas; and 11 unclassified lesions. The peak age for all the benign tumours was in the third decade. All the haemangiomas occurred in the first four decades, 75% of the squamous cell papillomas were in the fifth decade and above, while 75% of neurofibromas were in the first two decades (Table2).

Table 1: Histological Type And Sex Distribution Of Benign Oral Tumours

Histological Type	Male	Female	Total (%)
	(%)	(%)	
Squamous Cell Papilloma	6(11)	6(11)	12(21)
Haemangioma	3(5)	8(14)	11(20)
Fibroma	4(7)	3(5)	7(13)
Myxoma	3(5)	3(5)	6(11)
Lipoma	4(7)	1(2)	5(9)
Neurofibroma	2(4)	2(4)	4(7)
Unclassified	5(9)	6(11)	11(20)
Total	**27(48)**	**29(52)**	**56(100)**

Table 2: Age Distribution Of Benign Oral Tumours

Histological Type	Age (Yrs)								Total
	0 -9	10 -19	20 -29	30 -39	40 -49	50 -59	60 –69	70+	
Squamous Cell Papilloma	1	0	1	1	4	0	4	1	12
Haemangioma	3	1	5	2	0	0	0	0	11
Fibroma	1	0	2	2	2	0	0	0	7
Myxoma	0	1	4	0	0	0	1	0	6
Lipoma	0	2	1	0	1	0	1	0	5
Neurofibroma	1	2	0	0	1	0	0	0	4
Unclassified	3	2	2	2	1	1	0	0	11
Total	**9**	**8**	**15**	**7**	**9**	**1**	**6**	**1**	**56**

Table 3: Histological Type And Sex Distribution Of Malignant Oral Tumours

Histological Type	Male (%)	Female (%)	Total (%)
Squamous Cell Carcinoma	81(52.6)	34(22.1)	115(74.7)
Fibrosarcoma	3(1.9)	3(1.9)	6(3.9)
Malignant Melanoma	1(0.7)	3(1.9)	4(2.6)
Heamangiopericytoma	1(0.7)	1(0.7)	2(1.3)
Unclassified	21(13.6)	6(3.9)	27(17.5)
Total	**107(69.5)**	**47(30.5)**	**154(100)**

Table 4: Age Distribution Of Malignant Oral Tumours

Histological Type	Age (Yrs)								Total
	0 -9	10 -19	20 -29	30 -39	40 -49	50 -59	60 -69	70+	(%)
Squamous Cell Carcinoma	0	0	7	17	19	35	18	19	115(74.7)
Fibrosarcoma	2	2	1	1	0	0	0	0	6(3.9)
Malignant Melanoma	0	0	2	1	0	0	1	0	4(2.6)
Heamangiopericytoma	0	1	1	0	0	0	0	0	2(1.3)
Unclassified	2	0	4	3	6	6	5	1	27(17.5)
Total	**4**	**3**	**15**	**22**	**25**	**41**	**24**	**20**	**154(100)**

The benign tumours had an overall M: F ratio of 1:1.1. Squamous cell papillomas, myxomas and neurofibromas all had an equal male to female ratio, while haemangiomas had a female preponderance of 1:2.7 and lipomas a male predominance of 4:1 (Table 2). The malignant tumours were made up of 115 squamous cell carcinomas; 6 fibrosarcomas; 4 malignant melanomas; 2 heamangiopericytomas; and 27 unclassified malignant lesions. They had an overall M:F ratio of 2.3:1. Squamous cell carcinoma had a M:F ratio of 2.4:1. Fibrosarcomas and heamangiopericytomas had equal sex ratio while malignant melanoma had a female preponderance of 3:1 (Table 3). The peak age for all the malignant oral tumours was in the sixth decade. Squamous cell carcinomas had an age range of 21 – 82 years with peak in the sixth decade. Fibrosarcomas and heamangiopericytomas were seen in the second to third decades, while melanomas were spread from the third to the sixth decades (Table 4).

Discussion

Most of the tumours arising in the oral cavity do so from the lining squamous epithelium. In the present study the ratio of malignant to benign tumours is almost 3:1. This is in agreement with most of the studies on oral tumours.[2, 4, 12, 13] Squamous cell carcinoma constituted more than half of all cancers of the oral cavity seen in the our study confirming Adekeye's finding of 57.7%.[12] In India Daftry's[14] observation was 90%. This high prevalence of squamous cell carcinoma of the oral cavity is attributed to tobacco usage, aerodental factors (cracked and mal-aligned teeth, leukoplakia), dietary deficiencies, and some viruses - HPV (serotype 16) and HIV. In the Nigerian society

chewing of tobacco products and kolanuts is a very common social indulgence, additionally, dental hygiene is generally poor especially in the rural areas, while in India this is partly blamed on widespread chewing of betel nuts.[14] With the increasing prevalence of HIV in African countries and increasing targeting of third world countries by international tobacco manufacturers, it is expected that this incidence can only go up. An association was described between squamous cell carcinoma of the oral mucosa, tongue and pharynx and marijuana use among 34 young males aged between 20 -40 years in Germany who developed this cancer within 7 years of its use.[7]

The male preponderance we observed is also complimented by other studies of squamous cell carcinoma in the oral cavity.[7, 12] The mean age of 51.4 years of our patients with squamous cell carcinoma was higher than the 45 years reported by Adekeye[12] in Kaduna but lower than the 63 years reported by Jovanic[15] in Netherlands. Our study excluded pyogenic granuloma, a lesion considered by most to be a reactive rather than a neoplastic condition.[5,10] Squamous cell papilloma is the most frequent benign oral tumour in the present report, while Adekeye's[12] study, which did not exclude pyogenic granuloma, had haemangioma as the most frequent. Both fibrosarcoma and heamangiopericytoma had equal male to female sex ratio. This is supported by Edington et al., who noted 'no sex differences' in a review of 13 sarcomatous oral tumours.[16]Oral mesenchymal tumours were more frequent among the younger age groups in our study with fibrosarcoma having a mean age of 17 years and heamangiopericytoma 20 years. The relative young age of presentation is supported by Lyos et al., who noted among 134 patients with soft tissue sarcoma of the head and neck an age range of 2 months to 20 years with a mean age of 16 years.[17] Malignant melanomas of the oral cavity are relatively rare, we reviewed four with a mean age of 35 years similar to the 39 years reported by Goubran et al. in Kaduna amongst three cases.[13]

It is concluded that squamous cell carcinoma is the commonest oral neoplasm seen in Zaria and it occurs at a younger age than is seen in more developed countries of the West.

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