

Original Research Article

Epidemiological, clinical and histological profile of oral carcinomas at the Sylvanus Olympio University Hospital in Lomé

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ABSTRACT

Background: Early detection of oral carcinomas is a crucial public health issue. The aim of this study was to describe the epidemiological, clinical and histopathological profile of carcinomas diagnosed in a referral healthcare facility in Lomé

Methods: A retrospective descriptive study was conducted over a period of 10 years, including the medical records of patients presenting with carcinoma of the oral cavity confirmed by anatomopathological examination. Clinical and histopathological socio-demographic parameters were collected and analysed using R software version 4.0.4.

Results: Forty-five (45) cases of carcinoma of the oral cavity were included, with an annual frequency of 4.5 cases. Males predominated with 68.9% of cases. The age group 55 and over was the most affected, with 71.2% of the sample. Alcohol was the most common risk factor (82.2%). The tongue was the preferred site of oral carcinomas with 55.5% and squamous cell carcinoma was the most common histological type.

Conclusions: The carcinoma of the oral cavity in Lomé are predominantly male, in relatively elderly patients with an alcohol-smoking past. While awaiting more in-depth studies on risk factors, raising awareness of the harmful effects of these factors will make it possible to deduce the incidence and morbidity of carcinomas in Togo.

Keywords: Oral cancer, Oral carcinoma, Lomé

INTRODUCTION

Oral cancer is the result of degeneration linked to alterations in the cellular genetic make-up and/or epigenetic alterations of biotic, xenobiotic and/or abiotic origin.¹ In 2018, the global estimate of oral cavity cancer was 354864 new cases with 177384 deaths, making it the fourth most common cancer and the sixth leading cause of death in low- and middle-income countries.² Cancers of the oral cavity are becoming increasingly common, representing a major public health issue in many countries. In Africa, a study carried out in Burkina Faso showed that cancers of the oral cavity were the sixth most

common histologically confirmed cancer.³ In Benin in 2020, cancers of the oral cavity were the second most common cancer of the head and neck, behind those of the pharynx, at 19.8%.⁴ In Togo, an epidemiological study of cancers in 2017 showed that cancers of the oral cavity accounted for 1.7% of all histologically confirmed cancers.⁵

Oral carcinomas account for 90% of cancers of the oral cavity and pharynx.⁶ Fifty thousand new cases are diagnosed each year, 3/4 of them in developing countries.^{7,8} Oral carcinoma can affect the lips (vermillion border and inner surface), the inner surface of the cheeks,

the anterior two-thirds of the tongue, the retro-molar trigone, the floor of the mouth, the gums and the hard and soft palate.⁹ They occur in 10 to 80% of cases, depending on the study, on a precancerous lesion and can affect both adults and young people.¹⁰⁻¹² The main risk factors are alcohol and tobacco, but dietary, familial and genetic factors, as well as certain oral diseases, may also play a role in the development of these cancers.¹ Treatment can leave severe functional and aesthetic after-effects, and have a major impact on quality of life.⁹

Screening and early detection of oral carcinomas are crucial public health issues. They help to reduce mortality from this type of cancer. Effective control requires knowledge of the current state of this cancer in the country. In Togo, very little data exists on carcinoma of the oral cavity.

The aim of this study is to describe the epidemiological, clinical and histopathological profile of carcinomas diagnosed at the Sylvanus Olympio University Hospital in Lomé.

METHODS

Study design

A retrospective and descriptive study was conducted over a 10-year period from 1st January 2010 to 31th December 2019 in the odonto-stomatology and maxillofacial surgery department of the Sylvanus Olympio University Hospital, which is the national reference department for the management of cancers of the oral cavity.

Inclusion and non-inclusion criteria

The medical records of patients with carcinoma of the oral cavity confirmed by anatomopathological examination in the anatomy and pathological cytology laboratory of the CHU-SO were included. Records of patients with other types of the oral cancer were not included.

Data collection

Medical records were identified from anatomopathological report registers, consultation and hospitalization registers. Socio-demographic (sex, age, profession), clinical (risk factors, tumor topography, macroscopic appearance) and histopathological parameters were collected.

Data analysis

Data were entered using Microsoft excel and analysed using R software version 4.0.4. Qualitative variables were described by their numbers and percentages and quantitative variables by their means and standard deviations with a 95% confidence interval.

Ethical considerations

The agreement of the CHU-SO ethics committee was obtained and the anonymity of the patients was preserved.

RESULTS

Forty-five (45) cases of patients with oral carcinoma were included in our study, representing 15.7% of upper aerodigestive tract cancers (285 cases) diagnosed during the study period. The annual incidence of oral carcinoma was 4.5 cases.

Males accounted for 68.9% of cases, with a sex ratio of 2.2. The median age was 49.2 years, ranging from 15 to 89 years. The 55-and-over age group accounted for 71.2% of the sample. Table 1 shows the socio-demographic characteristics of the sample.

As risk factors, alcohol intoxication was found in 82.2% of cases of oral carcinoma. The other risk factors found in the patients are presented in Table 1.

The tongue was the site of oral carcinomas in 55.5% of cases and ulceration was found in 48.8% of cases. The different locations and macroscopic aspects are shown in Table 2.

Histopathologically, 32 squamous cell carcinomas were diagnosed. Figure 1 shows the histological types of oral carcinoma found in the sample.

There was no correlation between the histological types of oral carcinomas and socio-demographic characteristics (Table 4), or between oral location and macroscopic appearance (Table 5).

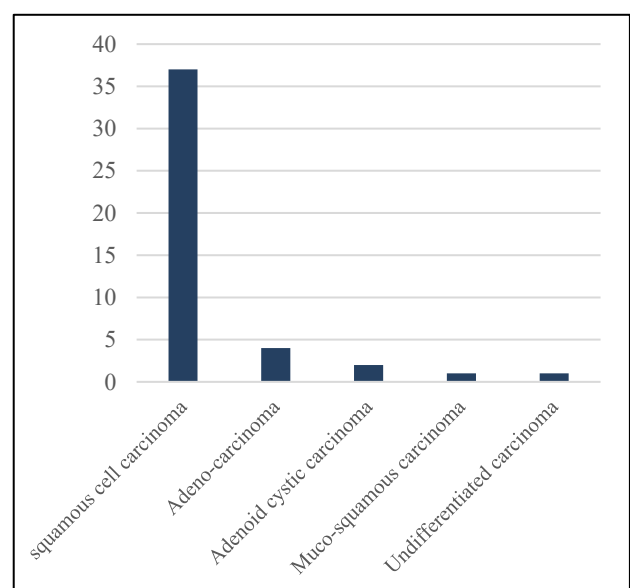


Figure 1: Distribution of histological types of oral carcinoma in the sample.

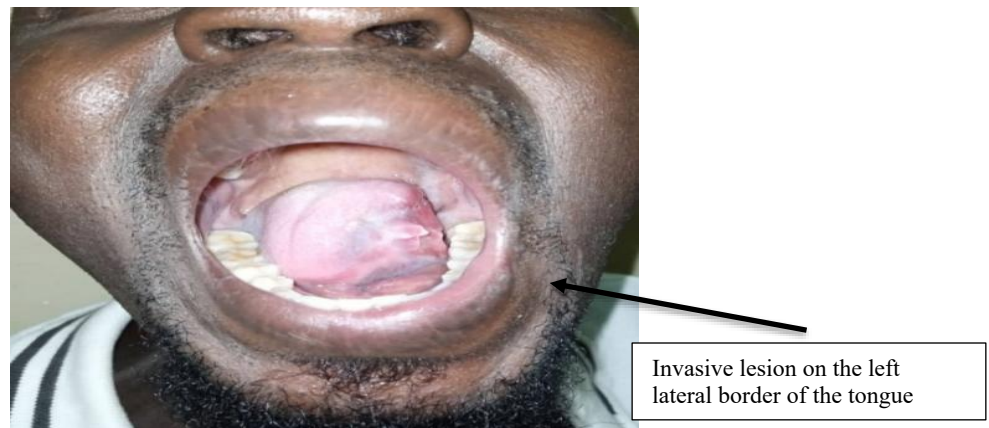


Figure 2: Case of squamous cell carcinoma of the left lateral border of the tongue evolving as an infiltrating lesion in a 51-year-old patient.

Table 1: Distribution of socio-demographic characteristics and risk factors associated with oral carcinomas in the sample, (n=45).

Variables	N	Percent (%)
Gender		
Female	14	31.1
Male	31	68.9
Age group (in years)		
15-34	6	13.3
35-54	7	15.5
55 and over	32	71.2
Profession		
Farmers	15	33.3
Retired	14	31.1
Unemployed	08	17.7
Fonctionnary	05	11.1
Students	3	6.8
Risk factors		
Alcohol	37	82.2
Smoking	31	68.8
History of HPV infection	13	28.8
History of precancerous lesions		
Proliferative verrucous leukoplakia	4	8.8
Erythroplasia	3	6.6
Leukoplakia	1	2.2
Lichen planus	1	2.2

Table 2: Oral location and macroscopic aspects of the oral carcinomas in the sample, (n=45).

Variables	N	Percent (%)
Oral location		
Tongue	25	55.5
Oral floor	8	17.7
Lips	7	15.5
Gums	3	6.6
Palate	2	4.7
Macroscopic aspects		
Ulcerated forms	22	48.8
Vegetated forms	13	28.8
Infiltrative forms	8	17.7
Ultero-vegetative forms	2	4.7

Table 3: Socio-demographic and clinical characteristics associated with histopathological types of oral carcinoma.

Variables	Squamous cell carcinoma (n=32)	Others carcinoma (n=13)	P value
Gender			
Female	10	4	1
Male	22	9	
Age group (in years)			
15-34	4	2	0.96
35-54	5	2	
55 and over	23	9	
Profession			
Farmers	11	5	0.69
Retired	9	3	
Unemployed	5	3	
Fonctionnary	5	1	
Students	2	1	
Oral location			
Tongue	18	7	0.58
Oral floor	5	3	
Lips	5	2	
Gums	2	1	
Palate	2	0	
Macroscopic aspects			
Ulcerated forms	15	7	0.85
Vegetated forms	9	4	
Infiltrative forms	6	2	
Ulculo-vegetative forms	2	0	

DISCUSSION

The study focused on the epidemiological, clinical and histopathological profile of oral carcinomas over a 10-year period, from 1 January 2010 to 31 December 2019. The study was conducted at the Sylvanus Olympio University Hospital, which is the reference centre for the diagnosis and management of aerodigestive tract cancers in Togo. Such a public, national reference study setting has been used in similar studies in Burkina Faso, Nigeria and Sudan.¹³⁻¹⁵ It provides data on carcinomas of oral cavity that can be used to enrich the country's hospital cancer register.

The annual incidence of oral carcinoma in our study is relatively low compared with Burkina Faso, where it was 6.6 cases in 2015, and Senegal, where it was 50 cases in 2005.^{13,16} These authors included all the different types of cancer of the oral cavity in their studies. The standardised incidence rate for oral cancers was 5.8/100,000 person-years in men and 2.3/100,000 person-years in women in 2020.¹⁷ Cancers are among the isolating pathologies often likened to curses cast on affected patients. The latter prefer to turn to traditional therapists and charlatans rather than go to hospital. What's more, the CHU-SO is located in the capital, Lomé, in the far south of the country. Patients referred from the interior may, for economic reasons, postpone their evacuation. All these reasons may lead to an underestimation of carcinomas of the oral cavity.

A male predominance of oral carcinomas was found in our study, in line with the data in the literature.^{9,17,18} with a worldwide male/female ratio of 2.5 according to GLOSCAN2020.¹⁷ However, some authors have found a predominance of women.^{13,16} This female predominance is thought to be linked to the high number of women attending oral health care centres.¹³ In our Togolese context, alcohol and tobacco risk factors are more prevalent in men, which could explain the male predominance of oral carcinomas. However, in 2018, in France, the number of new cases of oral carcinoma was 3,106 in men and 1,751 in women. This rate decreased by 25% in men and more than doubled (+ 122%) in women, between 1990 and 2018 due to an increase in tobacco consumption among the latter and the ageing of the population.¹⁷

Tobacco and alcohol intoxication are the two major risk factors for carcinoma in our study, in line with the literature.^{13,17} Tobacco plays a role in the development of cancer due to the more than 300 chemical substances with carcinogenic properties that it contains. The most important of these are polycyclic aromatic hydrocarbons and nitrosamines specific to tobacco. Alcohol is thought to contribute to carcinogenesis by modifying the basal cells of the oral epithelium, making them more sensitive to carcinogenic compounds; the aldehydic metabolites of alcohol are also thought to have mutagenic properties.^{14,19,20} In the case of tobacco, the risk of developing oral carcinoma increases with the duration of

exposure, particularly after 20 years of packets.²¹ Conversely, after 20 years' cessation, the risk is no longer significantly different from that of non-smokers. Chewing tobacco is also a carcinogenic factor.²² The retrospective nature of our study did not allow us to record the quantity or mode of tobacco consumption. However, some authors have reported a high frequency of oral carcinomas in non-smokers and non-drinkers.^{16,20}

Lingual location was predominant in our study, in agreement with some authors.^{16,23} This lingual location is thought to be due to the fact that tobacco and alcohol act electively on the tongue. However, Amana et al and Eltohami et al had found a predominant location in the gums.^{15,24} Bambara et al found a predominance of the labia in their study.¹³

Ulcerated forms were the most common in our study, followed by vegetated forms, in line with the literature.^{1,20} Ulceration is characteristic of squamous cell carcinomas, which was the predominant histological type in our sample. It is usually a painless ulceration with regular raised, splayed edges and a firm consistency. However, these carcinomas present a clinical polymorphism.²⁵

In terms of histological type, there was a predominance of squamous cell carcinomas, in line with the literature.^{13,26} In French-speaking sub-Saharan Africa, squamous cell carcinomas of the oral cavity account for 2.1% of all cancers.^{14,27} These carcinomas are most often found in elderly patients with a history of alcohol and tobacco abuse. Our sample consisted mainly of elderly patients, with a predominance of alcohol- and smoking-related risk factors

CONCLUSION

Within the limits of this study, we can say that carcinomas of the oral cavity are predominantly male, in relatively elderly patients with a history of alcoholism and smoking. Squamous cell carcinomas are in the majority and occur preferentially on the tongue, most often in an ulcerated form. These hospital data enrich the hospital cancer register in Togo. While awaiting more in-depth studies on risk factors, raising awareness of the harmful effects of these factors will make it possible to deduce the incidence and morbidity of carcinomas in Togo.

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Conflict of interest: None declared

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