



Epidemiology of Oral Cancers Among Sudanese Population at Khartoum Dental Teaching Hospital, Khartoum, Sudan

Khidir Faisal Mahmoud*¹ and Eman Hafiz Suliman²

¹Dental Public Health Department, International University of Africa

²Oral And Maxillofacial Surgery Department, Khartoum Dental Teaching Hospital

***Corresponding author:** Khidir Faisal Mahmoud, Dental Public Health Department, International University of Africa, Sudan.

© All Rights Reserved by
Khidir Faisal Mahmoud

Received Date: April 19, 2024; **Published Date:** June 04, 2024

Abstract:

Background: Background: Oral cancer (OC) is becoming more common everywhere, making it a significant contributor to the overall burden of cancers. With 920 instances annually, OC is the sixth most prevalent cancer type in Sudan and accounts for 9% of all cases recorded each year in Africa. This study's goals were to examine the epidemiology of oral cancer and detail any instances that were reported to Khartoum Teaching Dental Hospital between 2014 and 2015.

Material and Methods: This is descriptive cross-sectional hospital-based study with two components: retrospective and exist survey. All files of the patients which were diagnosed as oral cancer and have been operated were selected. Record-based data collected using a form and exist survey data collected using a questionnaire. Data entered and analyzed using the SPSS.

Result: A total of 224 patients were studied. Their age ranged from 4 to 87 years and (33%) of them were 61 and above years. Around two thirds (59.8%) were male. And about one third (28.6 %) of the respondents were from Khartoum state. Squamous cell carcinoma (SCC) represents 60.8% of cases. A total of 125 cases (66.1%) showed good prognosis.

Conclusion: Male patients made up more of the oral cancer patient population than female patients, and the bulk of cases originated in Khartoum state. Oral cancer patients were typically 61 years of age or older.

Keywords: Squamous Cell Carcinoma, Human Papilloma Virus, Precancerous, Radiation Therapy.

Introduction

Oral cancer has been recognized as a huge threat to public health because of its high morbidity and mortality. It is estimated that each year there are over 484,000 people diagnosed with oral cancer in the world and approximately 261,000 people die of this disease [1]. In China, over 11,900 cases of oral

cancers are diagnosed each year and approximately 5,000 patients die of the disease [1]. A number of factors are associated with the increase of risks of oral cancer. The risk factors include age, tobacco and alcohol consumption, human papilloma virus infection, and race, etc [2-4].

Primary treatments of oral cancer include surgery, radiation and chemotherapy [3-6]. These treatments can be employed alone or in combination depending on the clinical stage and histology of oral cancer. Beside primary treatments, oral cancer patients may require additional care to ameliorate the side effects of treatment, such as oral pain due to the tumor or oral mucositis, weight loss, fatigue, nausea, vomiting, and altered salivary gland function (7-8). Although many studies were carried out in the area of oral cancer, still there is a gap in our knowledge. The distribution of cases according to age, gender, residence and the type of oral cancer need to be explored more. The direct cost related to oral cancer need to be more explored also.

Oral Cancer Overview:

In United states more than 34,000 new patients diagnosed with oral cancer in the United States annually, only half live past the five-year survival milestone [9].

Approximately 6,900 Americans die annually and for those who do survive, many are severely disfigured and suffer compromised lives [9].

People who use tobacco products tend to have a higher risk for oral cancer, and those who use tobacco products and consume excessive alcohol have an especially high risk [10].

25% of people those diagnosed with oral cancer have no risk effects. Risk increases for tobacco users, excessive alcohol consumption, overexposure to sunlight and poor nutrition [13]. Oral cancer has also been linked with human papilloma viruses, more commonly called HPVs [13] . Oral cancer is twice as common in men as in women [14]. However,

women are among the fastest-growing segments of those being diagnosed, as well as non-smokers and people under 40-years- old.

The average age of those diagnosed with oral cancer is 62-years-old, but about one-third of those diagnosed are under 55- years-old [14].

The most prevalent oral cancer sites are the tongue, floor of the mouth and the soft palate, but it also may be found on the lips, cheeks or gums.

Early Detection

If oral cancer is detected in the precancerous stage, it can be prevented. Other benefits of early detection include:

Treatment may be less invasive, treatment costs are lower and recovery time is minimized.

If caught early enough, the five-year survival rate jumps to 82.7% for localized oral cancer.

Results

The distribution of the patients according to the age is shown in table [1]. The age of the patients ranged from four years to 87 years in which (33%) were 61 and above years. The distribution of patients according to gender is shown in figure [1] Male patients were (59.8%) while (40.2) were females.

About one third (28.6 %) of the respondents were from Khartoum state followed by (16.5%) from Kurdofan states. Table [2]

The distribution of the patients according to marital status is shown in figure [2]. About (76.8%) were married while (17%) were single and only (1.8%) were children. occupation and the result is shown in table [3]. Workers and housewives represent (27.7%) respectively, while (19.6%) were farmers.

The Distribution of study sample according to type of cancer is shown in table [4]. Squamous cell carcinoma (SCC) represents more than half of the study sample (60.8%). Patients who had complete recovery were 61 patients (32.2%), while patients whom prognosis were better were 125 patients (66.1%). however only two patients passed away Figure [3].

Age	Frequency	Percent (%)
<10	6	2.7
11-20	15	6.7
21-30	25	11.2
31-40	17	7.6
41-50	39	17.4
51-60	48	21.4
61 and above	74	33
Total	224	100

Table 1: Distribution of study sample according to (Age) in KTDH 2014-2015.

	Frequency	Percent (%)
AI Khartoum State	64	28.9
AI Gazeera State	29	12.9
Kurdofan State	37	16.5
White Nile State	25	11.2
Northern State	20	8.9
Red Sea State	13	5.8
Blue Nile State	5	2.2
Dar four State	13	5.8
River Nile State	10	4.5
Sennar State	5	2.2
Others	3	1.3
Total	224	100

Table 2: Distribution of study sample according to (State) in KTDH 2014-2015.

Occupation	Frequency	Percent (%)
Farmer	44	19.6
Worker	62	27.7
House wife	62	27.7
Student	25	11.2
Retired	14	6.3
Employee	10	4.5
Teacher	3	1.3
Child	4	1.8
Total	224	100

Table 3: Distribution of study sample cording to (Occupation) in KTDH 2014-2015.

	Frequency	Percent (%)
S.C.C	136	60.8
Ameloblastic Carcinoma	29	13.1
Myoepithelium carcinoma	13	6.1
Mucoepidermoid carcinoma	10	4.4
Adenocarcinoma	10	4.4
Verrocus carcinoma	8	3.5
Ca.tongue	6	2.6
Basal cell carcinoma	5	2.1
Non-Hodgkin's lymphoma	4	1.7
Papillary carcinoma	2	0.9
Burkitt's lymphoma	1	0.4
Total	224	100

Table 4: Distribution of study sample cording to (Type of cancer) in KTDH 2014-2015.

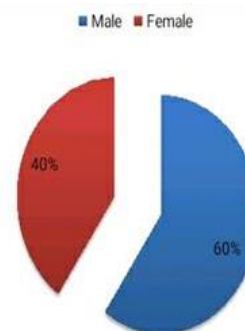


Figure 1: Distribution of study sample cording to Gender in KTDH 2014-2015.

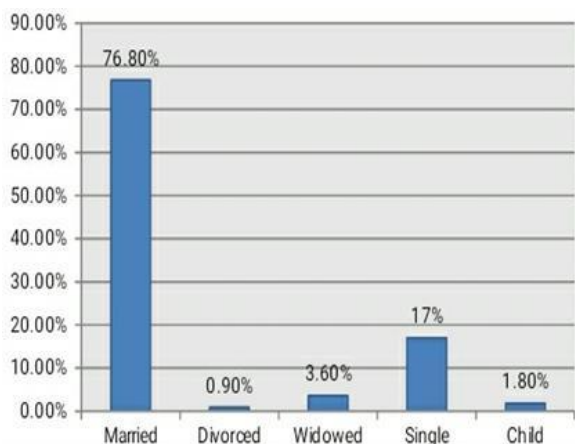


Figure 2: Distribution of study sample according to marital status in KTDH 2014-2015.

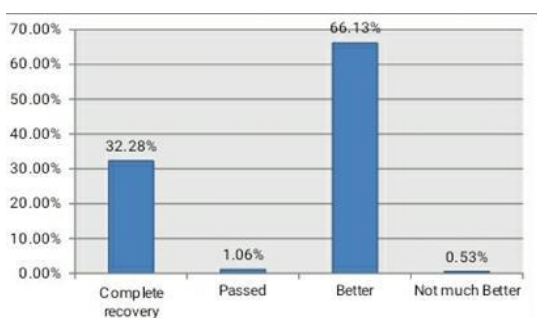


Figure 3: Distribution of study sample according to Prognosis in KTDH 2014-2015.

Discussion

In this study the epidemiology of oral cancer was described in terms of age, gender, residence and types cancer. About (33%) of the respondents who had oral cancer were 61 and above years old in which (59.8%) were males and (40.2%) were females. A study conducted by (Esraa Mosalleum 2014) stated that the peak age of oral and -lip cancers were 75 years for females and 65-69 years for males. The prevalence of OSCC above the age of 50 years was 79% and 76% for males and females respectively.

SCC represent the majority of oral cancer types, more than half of the study sample (60.8%). A study conducted by (Esraa Mosalleum 2014) stated that the most common type of malignancy reported was SCC which accounted for (66.5%) in Sudan [17].

In present study Khartoum state represent about (28.6%) which is the highest rate of distribution of oral cancer patients studied in this research, kourdofoan state was (16.5%)while Aljazeera state about (12.9%),in another study conducted found that Analysis of the geographical distribution of the cases recorded in KTDH revealed that only 5% of the cases originated from the South, compared to 28% from Khartoum state, 15% from Gezira state, 21% from the Eastern states collectively and another research conducted stated that northern Sudanese suffer from a high rate of SCC while southern Sudanese endure a higher rate of odontogenic and salivary gland neoplasm (Idris et al, 1995).

Prognosis of registered cases

Regarding the prognosis of registered cases which included in this study, were 61 patients (32.2%) had complete recovery, while patients whom prognosis were better were 125 patients (66.1%). however only two patients passed away.

Conclusion

The study revealed that:

The majority of patients with oral cancer were 61 and above years old.

Male patients were more than female patients, Majority of cases came from Khartoum state represent.

Recommendations

Oral health education, promotion and awareness programs regarding the risk factors, clinical presentation and signs of oral cancer are needed

References

1. Ferlay J, Bray F, Pisani P, Parkin DM (2004) IARC Cancer Base No. 5. Version 2.0. Lyon: IARC Press; GLOBOCAN 2002: Cancer incidence, mortality and prevalence worldwide.
2. Laronde DM, Hislop TG, Elwood JM, Rosin MP (2008) Oral cancer: just the facts. *J Can Dent Assoc.* 74: 269-272.
3. Kademani D (2007) Oral cancer. *Mayo Clin Proc* 82: 878-887.
4. Schwartz SM, Daling JR, Doody DR, Wipf GC, Carter JJ, Madeleine MM (1998) Oral cancer risk in relation to sexual history and evidence of human papillomavirus infection. *J Natl Cancer Inst.* 90: 1626-1636.
5. Hollows P, McAndrew PG, Perini MG (2000) Delays in the referral and treatment of oral squamous cell carcinoma. *Br Dent J* 188: 262-265.
6. The Early Detection of Oral Cancer Working Group. Guideline for the early detection of oral cancer in British Columbia 2008. *J Can Dent Assoc* 74: 245.
7. Barker GJ, Epstein JB, Williams KB, Gorsky M, Raber-Durlacher JE (2005) Current practice and knowledge of oral care for cancer patients: a survey of supportive healthcare providers. *Support Care Cancer* 13: 32-41.
8. Epstein JB, Parker IR, Epstein MS, Stevenson-Moore P (2004) Cancer-related oral health care services and resources: a survey of oral and dental care in Canadian cancer centers. *J Can Dent Assoc.* 70: 302-304.
9. "Cancer Facts & Figures 2011." (2011). American Cancer Society.
10. Schantz SP, Yu GP (2002) Head and neck cancer incidence trends in young Americans, 1973-1997, with a special analysis for tongue cancer. *Arch Otolaryngol Head Neck Surg* 128: 268-274.
11. Lingen M, Sturgis EM, Kies MS (2001) Squamous cell carcinoma of the head and neck in nonsmokers: clinical and biologic characteristics and implications for management. *Curr Opin Oncol* 13: 176-182.
12. Cancer Stat Facts: Oral Cavity and Pharynx Cancer. National Cancer Institute, SEER Oral Cancer Survival Rates 1999-2005.
13. Esraa Mosalleum (2014) Epidemiology of Oral Malignancies in the Sudan (2004-2008) University of the Western Cape, Cape Town, South Africa
14. Idris AM, Ahmed HM, Mukhtar BI, Gadir AF, EL-beshir EI (1995) Descriptive epidemiology of oral neoplasms in Sudan 1970-1985 and the role of toombak. *Int J Career* 61: 155-158.

Copyright: © 2024 Khidir Faisal Mahmoud This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.