



## Synopsis of Inoperable Lesion of the Head and Neck in a Developing World: Our Experience

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### Abstract

**Background:** The difficulties in the surgical management of cancer of the head and neck region when they present late cannot be underestimated. In Nigeria, as it's often the case with most developing countries, a vicious chain reaction of poverty, superstition, ignorance, poor health-seeking behavior and limited options of treatment result in patients default for late presentation. This paper identifies and brings into focus the reasons for late presentation of orofacial cancers in Nigeria.

**Methods:** The case notes of eight-nine patients with inoperable head and neck lesions diagnosed as cancer in three specialist centers between January 2005 and December 2016 were retrieved and analyzed. Data collected include socio-demographic data, diagnosis, time-interval before presentation, reasons for late presentation and treatment outcome.

**Results:** A male-to-female ratio of 1.5:1 was obtained. Out of the 89 patients, the most occurring lesion was squamous cell carcinoma (n=48; 54%). All presented at the late stage of the lesion. The major reasons for late presentation were poverty (n=38; 42.7%), ignorance of the disease (n=15; 16.9%), non-availability of medical personnel and treatment by quacks (n=17; 19.1%), preference for unorthodox treatment (n=12; 13.4%) and family decisions (n=7; 7.9%). None of the patient survived.

**Conclusion:** There is an urgent need for awareness campaign and programmes for early detection of head and neck cancer and provision of hospitals with modern facilities for adequate and effective treatment. The need also exists for professional interactions and exchange programmes among surgeons across the world to assist the poorer countries in the management of these advanced tumour cases.

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### Introduction

The epidemiological realities of the morbidity and mortality of head and neck cancer when they present late especially in a developing country such as Nigeria with limited option of treatment cannot be underestimated. Worldwide, head and neck cancer constitutes serious health morbidity and mortality with its incidence varying widely according to geographical location and site of the body characterized by age, sex, or race [1-3]. Cancer incidence in Africa is on the increase and according to the WHO report 12.5% of all deaths worldwide are attributable to cancer and if the trend continues unchecked, it is estimated that by 2020, 16 million new cases will be diagnosed per annum out of which 70% will be in the developing countries [4]. Head and Neck cancer, on the other hand, is becoming a new epidemic as several new cases are being reported with increasing mortality rate [5]. Head and neck cancers are categorized by area of the head or neck in which they begin and they include; oral cavity, the pharynx which has three part; nasopharynx, oropharynx and hypopharynx; Larynx; Paranasal cavities and Nasal cavity; Salivary glands. Cancers of the oral cavity are more common cancer of the head and neck region and make up 3% to 4% of all cancers generally, being in eighth place in men and eleventh in women when the cancer is caused by smoking and alcohol misuse with 5-years prevalence level of 4.2% for all cancers cases affecting the lip, oral cavity, and the nasopharynx [4,5]. The increasing incidence of oral cancer and the associated mortality rate emphasizes the need for preventive measure [6]. Head and Neck cancer is a multifactorial disease where no single clearly recognizable cause has been found as the precise role of any individual factor or condition is poorly understood [5]. However, there are some etiological factors which include social habits (tobacco, alcohol, betel chewing), infections (bacterial, fungal, viral), extrinsic factors (poor oral hygiene, actinic radiation, industrial hazards) and intrinsic factors (genetic, nutritional

deficiencies, immunodeficiency/suppression) [7]. Poor oral hygiene and missing teeth may be weak risk factors for cancers of the oral cavity while occupational exposure to wood dust is a risk factor for nasopharyngeal and laryngeal cancer [8-11]. Industrial exposures, including exposures to asbestos and synthetic fibers, have also been associated with cancer of the larynx [12]. Cancer of the paranasal sinuses and nasal cavity may be due to industrial exposure to wood or nickel dust or formaldehyde [13]. In developing countries such as Nigeria most patients present late due to chain reaction of event *via*: improper health seeking behavior, poverty and ignorance of the disease, treatment by quacks and unorthodox medication, non-availability of medical personnel, superstitious belief and family decisions. In Africa where health inequity is rife and poverty is commonplace, most of these cancer patients more often do not have financial backings to seek for medical care on time hence present late. Some of the patients are also abandoned to their fate as such ailment may be seen as a result of transgression committed by the individual in the past or vengeance from the offended gods. Consequently, several of the cancer cases present at an inoperable stage when the only option is palliative care. Late-stage cancer of the head and neck region has often been associated with having one of the worst effects on quality of life amongst affected patients [3]. Though surgical treatment of head and neck cancer cases could be very challenging because of the peculiarity of the structures in the region but early diagnosis and timely initiation of treatment may improve survival rate and quality of life. We are therefore of the opinion that awareness and cancer policy for early detection and treatment is needed in our Nigerian environment with international support.

## Materials and Methods

We carried out a retrospective evaluation of inoperable lesion of the head and neck region amongst the 89 patients with histological diagnosis of malignant lesion of various cellular types seen in three specialist hospital in Enugu Nigeria. These patients were referred to the units by the dental surgeons, medical practitioners and health centers in the catchments area of these hospitals probably because the head, neck, face and oral cavity were primarily involved. The 12-years study took place between January 2005 and December 2016. Clinical and laboratory findings were noted. Biopsies were obtained and sent for histological examination. Each patient underwent complete physical examination. All the patients had wide spectrum of lesions mostly characterized by massive destruction of orofacial tissues, ulcerative and fungating presentation (Figures 1-5). Data collected include socio-demographic data, histological diagnosis, time-interval before presentation, reasons for late presentation and treatment outcome. These were evaluated, analyzed and converted to relative value for generation of statistic.

## Results

All of the patients involved in this study were Nigerians. Most came from remote areas and were from lower economic class of the society with little or no formal education and live at a subsistence level. Of the 89 patients, 53 (60%) were male while 36 (40%) were females giving a male-to-female ratio of 1.5:1. The age range was 19 years to 82 years with mean years of  $58 \pm 6.8$ . All presented at the late stage of the lesion when palliative care rather than surgery was the treatment option. The most occurring lesion was squamous cell carcinoma ( $n=48$ ; 54%) with most of the elderly patients affected. Acinic cell was the least occurring lesion and only the three male patients were affected 3 (3.4%) of the 89 cases, no female was affected (Table 1).



**Figure 1:** A patient with extensive destruction of maxillofacial tissues that is inoperable.



**Figure 2:** An extensive destruction of mandibular bone with the soft tissues in an elderly patient.



**Figure 3:** A 56 years patient with massive inoperable pleomorphic adenoma with haematogenic infiltration.

Squamous cells, Osteosarcoma and Acinic cell significantly affected males than females (0.001') (Table 2). Rhabdomyosarcoma was seen in six (6.7%) patients out of which four (66%) were males and two (34%) females. The major reason for late presentation was poverty ( $n=38$ ; 42.7%) while family decisions ( $n=7$ ; 7.9%) was the least (Table 3). Fifteen patients ( $n=15$ ; 16.9%) were ignorance of the disease while 12 patients ( $n=12$ ; 13.4%) had preference for unorthodox treatment in the understanding that the disease is from unnatural cause and as such needed unconventional treatment. Seventeen ( $n=17$ ; 19.1) patients gave reasons of non- availability of medical personnel and ended up been treated by quacks none of the patient survived.

## Discussion

In the specialty of oral and maxillofacial surgery it's often common to encounter several cases of inoperable cancer lesion as a result of late presentation making palliative care the only option of



**Figure 4:** A massive inoperable salivary gland tumour in a 75 years old woman.



**Figure 5:** A young girl with inoperable destructive cancerous lesion of the mandibulo-maxillary tissues.

management. In Nigeria, as it's often the case with most developing countries, a vicious chain reaction of poverty, superstition, ignorance, poor health-seeking behavior and limited options of treatment result in patients default for late presentation. In this study most of the patients gave reasons of lack of money to seek for treatment as the main reason for presenting late. Poor health seeking behavior has always been an impediment to health care delivery especially at the local level. Regarding health seeking behavior, several factors play a role in shaping the health-seeking behavior of individuals, and they include predisposing variables such as age, gender, culture, religion, occupation, prior experiences with illness, level of education, general attitudes towards health services and knowledge about the presenting illness [14]. Others are the enabling factors such as availability of health services, financial resources, and social network and support services, perception of the severity of the disease. Identifying key factors relevant for the health-seeking behavior is helpful for planning health policy interventions. Experts in health interventions and health policies are increasingly becoming aware of human behavioral factors in quality health care provision. In order to respond to community perception and needs regarding their health care, health system and care providers need to adapt their strategies, taking into account the financial and human resource availability. Although peoples understanding of health matters varies according to culture, religious beliefs, norm and habits, in this study, 12 (13.4%) patients were seeking treatment in unorthodox ways while family decision affected seven (7.9%) of the patients. One must bear in mind that in Africa the extended family values are still the norms. An individual who has been benefited from the family structure is expected to owe allegiance to the system in return, and in certain situations, do not have autonomy to decide on his or her health matters without the family input [15]. On the other hand, most people believe that diseases are caused by

**Table 1:** Distribution of histological cancer types categorized by sex.

Cancer Types	No of Cases	Males	Females
Squamous cell	48 (54%)	28 (56%)	20 (44%)
Osteosarcoma	23 (25.8%)	15 (65%)	8 (35%)
Adenocystic	9 (10.1%)	4 (44%)	5 (56%)
Rahbdomyosarcoma	6 (6.7%)	4 (66%)	2 (34%)
Acinic Cell	3 (3.4%)	3 (100%)	Nil
Total	89 (100%)	54 (60.6%)	35 (39.4%)

**Table 2:** Comparison and test of significant between the male and female distribution of histological cancer types (squamous cells, osteosarcoma and acinic cell).

Cancer Types	Males	Females	$\chi^2$	P- Value
Squamous cell	27 (56%)	21 (44%)		
Osteosarcoma	15 (65%)	8 (35%)	34.2	0.001*
Acinic Cell	3 (100%)	0 (0%)		
Total	53 (60%)	36 (40%)		

**Table 3:** Reasons for late presentation adjusted by sex.

Reasons	No of Cases	Males	Females
Poverty	38	23 (60.5%)	5 (39.5%)
Ignorance	15	10 (60%)	5 (40%)
Rx by Quacks	17	11 (59%)	5 (41%)
Unorthodox	12	8 (67.6%)	4(32.4%)
Family Decisions	7	2 (29.5%)	5 (71.5%)
Total	89	54 (60.6%)	35 (39.4%)

supernatural beings, the handiwork of neighbors, or vengeance from an offended "god" as a result of transgressions committed in the past by an individual or parents [16]. Consequently, these groups of people prefer seeking traditional medical care rather than orthodox medical care and present late when the ailment has reached advanced stage with limited option of treatment. There is an urgent need for awareness campaign and programmes for early detection of head and neck cancer and provision of hospitals with modern facilities for adequate and effective treatment. The need also exists for professional interactions and exchange programmes among surgeons across the world to assist the poorer countries in the management of these advanced tumour cases.

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