

Short Communication

Follow up of Patients with Head and Neck Cancers in Jos, North-Central Nigeria

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Abstract

Background: This study aims to evaluate pattern of follow up visits among patients treated for head and neck cancers in our region.

Method: A sixty-five months retrospective cross-sectional study at the Jos University Teaching Hospital, Jos, North-central Nigeria.

Results: Twenty-eight (24.3%) patients aged between 20 and 88 years (mean= 54 years) presented with histologically diagnosed head and neck cancers. Nineteen were males and 9 females (male to female ratio 2.1:1). Nine (32.1%) presented with laryngeal cancer, 8 (28.5%) patients with nasopharyngeal cancer. Others were oropharyngeal cancer= 4; 14.3%, ethmoidal sinus cancer= 1; 3.6%, parotid cancer= 1; 3.6% and nasomaxillary cancer= 5; 17.9%.

Six (21.4%) patients attended follow up clinics following treatment. The duration of follow up ranged from 3 weeks to 23 months (mean= 11.5 months) during which 2 (7.1%) patients had recurrent tumors. There were no detected cervical lymph node recurrences.

Conclusion: Adequate public health education on the prevention of cancer, early detection of symptoms, early presentation to hospitals, treatment, follows up and rehabilitation is pivotal in improving the overall outcome of HNC.

INTRODUCTION

The follow up of patients treated for head and neck cancers (HNC) is indispensable. The objectives are early detection of recurrence, metastases and the presence of second primary tumors [1,2]. Follow up of patients is also essential for the management of impairments after tumor therapy, the psychological care of the patients and the evaluation of the efficacy of therapy [3].

Various modalities have been proposed in literature for the routine follow up of patients with HNC and practicing head and neck surgeons and oncologists all over the world use different guidelines and protocols to follow up their patients [1].

The outcome of patients with HNC is dependent on patient and tumor factors such as patient age, stage of tumor at presentation and the presence or absence of comorbidities [4]. In Nigeria, the limited availability of diagnostic and therapeutic facilities can be listed as factors affecting the outcome of patients with HNC. The interplay of the aforementioned is responsible for

the poor outcome in the management of patients with HNC in our environment.

The objective of this study is to determine the duration of follow up of patients after treatment for HNC, the extent of follow up visits and the diagnostic modalities employed in the process of follow up.

METHODS

This is a retrospective cross-sectional study of patients presenting to the Jos University Teaching Hospital, Jos, Nigeria with head and neck cancers within the period November 2009 to April 2015.

Approval for this study was obtained from the Ethical Clearance Committee of the Jos University Teaching Hospital.

The Jos University Teaching Hospital is a 500-bed-space tertiary referral hospital situated in the north-central part of Nigeria attending to patients referred from other secondary and tertiary hospitals in about seven neighboring states.

All patients presenting either through the Otolaryngology outpatient clinic or the accident and emergency department of the hospital with head and neck cancers within the study period were managed. The presentations were representative of all head and neck cancer sites and stages. Laboratory and radiological investigations were carried out on all the patients. All patients had biopsy of their tumors (inclusive of Examination under Anesthesia with incisional and excisional biopsies, per-nasal biopsy of tumors using local anesthesia and total excision of tumors with therapeutic intent). The specimens were all subjected to histological diagnosis.

All patients were given appointments for follow up after treatment and the post treatment clinical findings, laboratory work up and subsequent therapy were documented in the patients' case notes.

The inclusion criteria in this study were all head and neck cancer lesions of epithelial, connective tissue or neural origin showing histological features of malignancy as classified in the International Statistical Classification of Diseases and Related Health Problems, 10th revision, edition 2010 (ICD-10) [5]. Secondary/metastatic tumors were also included. The exclusion criterion was benign neoplasms of the head and neck region.

The clinical staging employed for all patients was based on the TNM classification as developed and maintained by the Union for International Cancer Control (UICC) and the American Joint Committee on Cancer (AJCC) [6].

The following data were extracted from the patients' case notes and analyzed: age, gender, site of tumor, symptom duration before hospital presentation, stage of tumor at presentation, the type of multi-disciplinary and multi-modality management instituted, outcome of management, duration of follow up visits and the clinical and laboratory findings during follow up.

Data were analyzed using the statistical software Epi Info version 7.1.3.0 (Epi Info, Center for Disease Control, Atlanta, Georgia, USA, 2013).

RESULTS

One hundred and forty eight patients were attended with head and neck tumors within the study period of which 43 (29.1%) patients presented with histologically diagnosed head and neck cancers (Table 1). These patients were aged between 20 and 88 years (mean= 57 years; SD=+/- 7.85).

Presentations

The presentations were representative of all head and neck cancer sites and stages. Thirty were males and 13 females (male to female ratio 2.3:1) with peak age incidences of cancers in the 6th to 8th decades of life. The recorded occupations were housewife (n=5; 11.6%), civil servant (n=13; 30.2%), farmer (n=12; 28%), student (n=5; 11.6%), clergy (n=1; 2.3%), unemployed (n=4; 9.3%) and tailor (n=3; 7%).

Ten (23.2%) patients presented with laryngeal cancer and 17 (39.5%) with nasopharyngeal cancer. Others were oropharyngeal cancer= 4; 9.3%, ethmoidal sinus cancer= 1; 2.3%, parotid cancer=2; 4.7%, nasomaxillary cancer= 7; 16.3% and oral cancer= 2; 4.7% (Figure 1). The time from commencement

Table 1: Age distribution of patients with cancers.

Age Percentage	Male	Female	Frequency
20- 29	2	1	7.0
30- 39	3	1	9.3
40- 49	2	3	11.6
50- 59	9	4	30.2
60- 69	6	2	18.6
70- 79	5	2	16.3
80 89	3	0	7.0
TOTAL	30	13	100

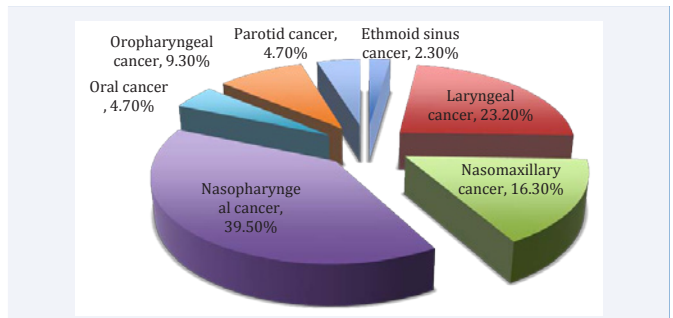


Figure 1 Primary cancer sites at presentation.

of symptoms to hospital presentation was 10 weeks to 67 weeks (mean= 38.5 weeks).

Twelve (28%) patients purchased drugs from the chemist shop for their ailment, 19 (44.2%) patients ingested herbal medications, 3 (7%) patients, visited spiritual healers for their ailment before presenting to the hospital.

Hypertension was the comorbid condition reported in 4 (9.3%) patients.

Social history

Eight patients agreed to smoking more than 10 sticks of cigarettes consistently per day for between 10 and 30 years. Thirteen patients took alcohol occasionally. There were no recorded histories of chewing of tobacco, betel nuts, exposure to industrial chemicals/ fumes and wood dust in all the patients.

Stage of cancer at presentation

Squamous cell carcinoma (n=16) accounted for 37.2% of cases (Table 2), followed by undifferentiated carcinoma (n=9; 20.9%). Four patients presented with stage I (T1, N0, M0) nasopharyngeal-undifferentiated cancer and two with stage I oropharyngeal squamous cell cancer respectively. Eleven patients presented with stage II (T2, N0, M0) cancers. Twenty-one patients had stage III (T3, N0, M0 and any T, N1, M0) cancers at presentation and five with stage IV (any T, N2, M0 and any T or any N, M1) cancers (Table 3).

Treatment

Twenty-six (60.5%) patients had emergency tracheostomy, 10 (23.2%) had total laryngectomy with one patient dying on the operating table. Seventeen (39.5%) patients were recorded to have had examination under anesthesia and biopsy while 7 (16.3%) had direct laryngoscopy under general anesthesia.

Table 2: Histological subtypes at presentation.

Histological subtypes	Frequency	Percentage
Adenocarcinoma	3	7.0
Adenoid cystic carcinoma	4	9.3
Esthesioneuroblastoma	1	2.3
Lymphoma	4	9.3
Primary SCC	16	37.2
Well-differentiated SCC	6	14.0
Undifferentiated SCC	9	20.9
TOTAL	43	100

Abbreviations: SCC: Squamous Cell Carcinoma

Table 3: Clinical staging at presentation.

Stage	Frequency	Percentage
I	6	14
II	11	25.6
III	21	48.8
IV	5	2
Recurrent cancer	2	4.7

Sixteen (37.2%) patients had tumor excision of various kinds and 42 (97.7%) were sent for further treatment (radiotherapy +/- chemotherapy) in another hospital in a neighboring state. All the patients were responsible for financing their health bills.

Follow-up/ Treatment outcome

Twenty-three patients were lost to follow up therefore the lost to follow up rate was 54.8%. Nineteen (45.2%) patients presented to the clinic following treatment. The frequency and follow up care was individualized based on each cancer type, the type of treatment received and the presence of comorbid conditions. During this period, 2 (4.7%) patients had recurrent tumors with follow up chest X-ray also revealing metastasis to the lungs in the patient with recurrent parotid cancer who eventually died. There were no detected cervical lymph node recurrences. No patient had a second primary tumor. All other patients are still being followed up.

DISCUSSION

The principle of follow up of patients who have had treatment for head and neck cancers vary between centers and specialists but is dependent on the type of cancer, the treatment type received and the patient's overall health condition [7]. However, the needs for follow up focusing on proper management of symptoms, early detection of recurrent disease or the presence of a second primary tumor cannot be over-emphasized.

Data is scarce in Nigeria on the subject of follow up of patients treated for head and neck cancers. However, like previous other studies on head and neck cancers both local and international, our study shows a male preponderance with a similar mean age at presentation but differences in the peak age incidences [4,8-11]. Nasopharyngeal cancer was the commonest type of cancer we recorded, which is similar to previous reports with another study

reporting oral cancer as the commonest in our environment [10, 12, 13]. However Shashinder et al., and Altumbabic et al., recorded the larynx as the commonest site of head and neck cancers [11, 14] in their studies and this is at variance to our finding.

This study reports advanced disease stage presentation amongst our patients and a poor follow up visit with 45.2% of head and neck cancer patients presenting following treatment. A loss to follow up rate of 54.8% is recorded and this is alarming. The interplay of various factors is responsible for this result and these include but not exclusive to late hospital presentation by patients, poor patient knowledge of the effects of cancers, inaccessible health facilities, the dearth of diagnostic and therapeutic tools for management of patients and the delay in the availability of histopathology results following tissue biopsies.

It is a well-known fact that patients in our environment usually present late to hospital [15]. This is explained as due to poverty, ignorance and certain myths passed down the generations amongst the people. Majority of patients in our environment, especially those in the rural areas lack the financial means to access modern health facilities due to high poverty level and this is further compounded by harmful traditional beliefs and practices which makes them visit the herbalist for solutions to their health problems so when they present to us, their tumors would have reached advanced stages and hence a poor outcome in management [4]. The interplay of poverty and ignorance may also be responsible for the significant number of our patients visiting the chemist shops and the spiritual healers for respite to their ailments hence presenting with advanced tumor stages as recorded in our study.

The details of follow up such as timing of outpatient visits, diagnostic laboratory and radiological workup are specific for the different types of tumors and localizations but also depend on the type of treatment, availability of diagnostic equipment and socio-economic factors [7]. Most hospitals in our environment suffer a dearth of diagnostic and therapeutic tools in patient management and this is further compounded by the scarcity of manpower [4,12]. In addition to the above listed, logistic difficulties are encountered by patients in diagnosis and treatment. The fastest a histology report can be obtained in our center is two weeks and facilities for immunohistochemistry and immunocytochemistry, which are helpful in the diagnosis of HNC, are lacking. Frozen section, which is a standard procedure worldwide, used to determine the safety margins of resected tumors is not routinely used in the management of HNC in our center. These contribute to inadequate patient management and the delay in the diagnoses of head and neck cancers in our region.

All the patients in our study were referred for radiotherapy and/or chemotherapy following histological diagnosis with the nearest facility offering this service being 235 kilometers away from our center, which lacks facilities for oncological therapy. The cost of this treatment is enormous and given the fact that none of the patients in our series was under any form of health insurance cover may account for a number of our patients not even presenting to the referral centers for treatment. The extra financial burden on these patients occasioned by this referral for radiotherapy may deter them from even presenting to the referral center to receive treatment and a significant number we lost to follow up may actually fall into this category.

As part of the health sector reform program in Nigeria, the National Health Insurance Scheme (NHIS) was set up by federal law in 1999 to protect families from the burden of large medical bills [16,17] but this has largely been ineffective as a large number of the populace are not covered by the scheme and out-of-pocket spending for health care is a dominant burden.

The cost of management of HNC is enormous and requires planning, quality control, manpower training and the installation of necessary diagnostic and therapeutic tools to forestall. With two thirds of the world's population living with cancer located in developing countries [18] it behooves government therefore to liaise with international agencies to assist in alleviating the burden on citizens by ensuring adherence to a fore mentioned strategies.

CONCLUSION

Our data demonstrates the late hospital presentation of patients with head and neck cancers in our region and their poor attitude to follow up following treatment.

Adequate public health education on the prevention of cancer, early detection of symptoms, early presentation to hospitals, treatment, follow up and rehabilitation are essential in improving the overall outcome of HNC in our region.

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