Prevalence of Head and Neck Cancers in Lokoja, Kogi State, North Central Nigeria

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ABSTRACT

Background: Head and Neck cancers constitute about 5-8% of total body cancers and are more common among the elderly, those with previous exposure to radiation, petrochemical byproducts and anti-cancers' drugs. Alcohol and tobacco have a synergistic causal effect on these cancers. Managing these cancers is challenging due to late presentation, funds and lack of necessary facilities.

Objectives: To determine the prevalence of head and neck cancers in Lokoja, to have a baseline data for future references and for public awareness programs.

Materials and Methods: A review of the data obtained from the Cancer Registry at Federal Medical Centre Lokoja North Central Nigeria from 2009 January to 2016 December was undertaken and results presented in text and table format.

Results

A total of 303 cancers were histological diagnosed and registered in the hospital cancer register. They were 114 breast (37.8%), 99 prostate (32.7%), 31 skin (1023%), 28 lymphatic (9.24%), 18(5.9%) head and neck cancers and 13(4.2%) others. Of the 18 head and neck cancers found, Males were 8 and females were 10, and the male to female ratio was 1:1.25. Their ages range from 11 to 80 years, with a mean age of 28.33 years and a modal age of 51-60 years. Nasopharyngeal cancers were found commonest (38.8%), followed respectively by parotid cancers (22.2%) and thyroid cancers (11.1%).

Conclusions

Although head and neck cancers are relatively uncommon, this study had shown that they exist and with nasopharyngeal cancer being the commonest.

KEYWORDS: Head, neck, cancers, nasopharyngeal carcinoma.

Introduction

Head and neck cancers (HNC) are relatively uncommon in comparison with cancers of other parts of the body. They constitute 5–8% of total body cancers in Europe and America. Cancers statistics revealed that African-American men and women have a higher death rates from all cancers combined compared with Caucasian. In Nigeria varied prevalence of 10-40% has been found in earlier studies. Variability may largely be due to geographical variation, variable diet of the people and the degree of exposure to various carcinogens in different parts of Nigeria as heterogeneous society. The
ideal prevalence of head and neck cancers is difficult to establish in Nigeria where there are no cancer centers, most studies are hospital based and the majority of the patients still patronizing alternative medical practitioners. Studies had shown that head and neck cancers prevalent rates are higher in India, France and USA than in Nigeria.\(^7\)\(^9\) The burden of managing these head and Neck cancers in African, Nigeria inclusive, has long been realized to be enormous and the situation is not likely to be any better soon with the present economic recession confronting the continent.\(^10\)

Head and Neck cancers can be classified either on the basis of the anatomical site of occurrence or on the basis of their histopathology.\(^31\) In any case, their treatment will depend on patient's factors, stage of the disease at presentation, available facilities and man power.

Cancers aetiology is still unknown but some factors are known to influence their occurrences. Predisposing factors include geographical region and race of the individual, advancing age, previous exposure to irradiation, petrochemical byproduct exposure, past viral infections and prolonged use of alcohol or tobacco or both.\(^12\)\(^14\)

Description of study area
Lokoja is the administrative capital of Kogi state, Nigeria. Lokoja town has a heterogenous population made up of the Igala, Eriba, Yoruba, Nupe, Okun, Oworo, Bassa-Nge, Kakanda, Egbaru and Hausa. The population as estimated in the 2006 census indicated that the local government Lokoja had a population of 195,261. 45% of which comprises civil servants and business people, while 30% is made up of students and vocational workers and 25% farmers. Lokoja town lies on latitude 70°49' North of the equator and longitude 60°44' East of the Greenwich meridian. The town is the most centrally located in Nigeria, located at the confluence of the rivers Niger and Benue. The study was carried out in a 500 bed Federal Government Hospital, which serves as a reference, teaching and specialist centre for the area.

Study Population
All ages who presented and with the histological diagnosis of cancers in the Federal Medical Centre Lokoja and who had their case registered in the cancer registry.

Study Design
It is a retrospective hospital based study.

Ethical Consideration
Approval for this study was obtained from the Research and Ethical Committee of the Federal Medical Centre Lokoja, kogi state.

Materials and Methods
After obtaining approval from the Research and Ethical Review Committee of the Federal Medical Centre Lokoja, information about patient sex, age, type and site of cancer were obtained from the Cancer Registry of the hospital from 2009 January to December 2016. This was studied, analyzed and results presented in text and table format.

Results
A total of 303 cancers were histological diagnosed and registered in the hospital cancer register. They were 114 breast (37.8%), 99 prostate (32.7%), 31 skin (1023%), 28 lymphatic (9.24%), 18 head and neck cancers and 13 (4.2%) others as shown in table1. Of the 18 head and neck cancers found, Males were 8 and females were 10, and the male to female
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The male to female ratio was 1:1.25 as shown in figure1. Their ages range from 11 to 80 years, with a mean age of 28.33 years and a modal age of 51-60 years as indicated in figure2. Nasopharyngeal cancers were found commonest 7(38.8%), followed respectively by parotid cancers 4(22.2%), thyroid cancers 2(11.1%), sinonasal cancers 2(11.1%), skin cancers 2(11.1%) and tonsil cancer 1(5.6%) as shown in table2.

Table1: Total number of patients with cancers and their site of occurrence in Lokoja, North Central Nigeria

<table>
<thead>
<tr>
<th>Year</th>
<th>LN</th>
<th>Prostate</th>
<th>Blood Bladder</th>
<th>Thyroid</th>
<th>Nose</th>
<th>Neck</th>
<th>NP</th>
<th>Tonsil</th>
<th>Parotid</th>
<th>Breast</th>
<th>Skin</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>14</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>2011</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>2012</td>
<td>2</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2013</td>
<td>8</td>
<td>30</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>30</td>
<td>11</td>
</tr>
<tr>
<td>2014</td>
<td>5</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>2015</td>
<td>7</td>
<td>19</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>2016</td>
<td>3</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>99</td>
<td>9</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>7</td>
<td>14</td>
<td>114</td>
<td>31</td>
</tr>
</tbody>
</table>

Total cancers during the study period=303, Head and Neck cancers found=18, Prevalence=5.9%

Figure 1: Gender distribution of patients with Head and Neck Cancers in Lokoja
Male to female ratio=1:1.25
Table 2: Head and neck cancers and their site of occurrence in Lokoja

<table>
<thead>
<tr>
<th>Year</th>
<th>Thyroid</th>
<th>Nose</th>
<th>Neck</th>
<th>Nasopharynx</th>
<th>Tonsil</th>
<th>Parotid</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>0(00.0%)</td>
<td>2(11.1%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>2(11.1%)</td>
</tr>
<tr>
<td>2010</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>1(5.5%)</td>
<td>1(5.6%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>2(11.1%)</td>
</tr>
<tr>
<td>2011</td>
<td>1(5.6%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>1(5.6%)</td>
</tr>
<tr>
<td>2012</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>4(22.2%)</td>
<td>0(00.0%)</td>
<td>5(27.8%)</td>
</tr>
<tr>
<td>2013</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>4(22.2%)</td>
<td>0(00.0%)</td>
<td>1(5.6%)</td>
<td>5(27.8%)</td>
</tr>
<tr>
<td>2014</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>1(5.6%)</td>
<td>1(5.6%)</td>
<td>2(11.1%)</td>
</tr>
<tr>
<td>2015</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>1(5.6%)</td>
</tr>
<tr>
<td>2016</td>
<td>0(00.0%)</td>
<td>0(00.0%)</td>
<td>1(5.6%)</td>
<td>2(11.1%)</td>
<td>0(00.0%)</td>
<td>1(5.6%)</td>
<td>4(22.2%)</td>
</tr>
<tr>
<td>Total</td>
<td>2(11.1%)</td>
<td>2(11.1%)</td>
<td>2(11.1%)</td>
<td>7(38.8%)</td>
<td>1(5.6%)</td>
<td>4(22.2%)</td>
<td>18(100%)</td>
</tr>
</tbody>
</table>

Total Head and Neck cancers = 18, Nasopharyngeal cancers = 7 (38.9%)

Discussion

Head and neck cancers (HNC) are relatively uncommon in comparison with cancers of other parts of the body. In this study, breast cancers had the highest prevalence followed by prostate cancers, while all the head and neck cancers put together had a prevalence of 5.9%. This finding is in support of the global prevalence of 5–8% reported earlier. However, it is low when compared to other studies done in this country in the past. In this study, from 2009 to 2016, it appears that there is a significant rise in the incidence of the total body cancers as well as that of the head and neck cancers. This observation from this study alone may not be enough to conclude that there is an increase in the incident rates of cancers in this geographical region since there were no previous data to compare with. The prevalence of head and neck cancers may be difficult to establish in Nigeria as there are no head and neck cancer centers and facilities for diagnosis still lacking in many of our centers.
Prevalence of Head and Neck Cancer

Most studies are hospital based and the majority of the patients still patronizing alternative medical practitioners. The female preponderance found in this study is surprising to me as some of the known risk factors such as cigarette smoking and the intake of alcohol is not common amongst women in the studied population. Nasopharyngeal cancers are the most prevalent followed by the parotid cancers. This is not surprising as the geographical area of this study is the confluence of the Niger and the Benue rivers and fishing is both common as a hobby and as a profession among the people. This may have led the people to the consumption of smoked un-gutted fish at an early age which may have predisposed them to the cancers of the nasopharynx. This is in contrast to findings by Ologeet et al. who found sinonasal cancers commonest (18%) followed by thyroid (12.4%) and nasopharynx (11.3%) in their study. The burden of managing these head and Neck cancers in African with Nigeria inclusive has long been realized to be enormous and the situation is not likely to be any better soon with the present economic recession confronting the continent.

References


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