

Research Article

PROFILE OF CANCER PATIENTS ATTENDING TERTIARY HEALTH INSTITUTIONS IN SOUTHWESTERN NIGERIA

AJULO M. OLUGBENGA², MOODY J. OLANREWaju¹, OMOLE M. KAYODE², MOODY I.O³

¹Department of Pharmacognosy, Faculty of Pharmacy, University of Ibadan, ²Department of Clinical Pharmacy and Administration, Faculty of Pharmacy, University of Ibadan, ³Department of Epidemiology, Statistics and Environmental Health, College of Medicine, University College Hospital. Email: matgbeng@yahoo.com

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ABSTRACT

Cancer is a disease caused by normal cells changing so that they grow in an uncontrolled way. The uncontrolled growth causes a lump called a tumor to form. If not treated, the tumor can cause problem by invading normal tissues nearby or by causing pressure on other body structures. There are many different types of cancer, but all share one hallmark characteristic: unchecked growth that progresses toward limitless expansion. Ethics approval was first obtained, then questionnaires were distributed to eligible cancer patients attending clinic in the Department of Radiotherapy in University College Hospital, Ibadan and Department of Surgery in Lagos University Teaching Hospital, Lagos. The age range distribution of the one hundred (100) cancer patients that participated in this study were 26% for participants that aged between 31-40 years, 41-50 years (25%), 21-30 years (13%), 51-60 years (12%), 61-70 years (12%), 11-20 years (2%) and participants above seventy (70) years (10%). Also seventy-five (75%) of the cancer patients were females and 25% were males. Thirty-four (34%) of the cancer patients had secondary education, 22% had tertiary education, 15% had primary education, 14% had post graduate education while 13% had no formal education. Two (2%) did not indicate their level of education. It also revealed that 37% of the respondents had breast cancer, 17% had head and neck type of cancer, 14% had genitourinary type and 5% had gastrointestinal type while 2% had lung cancer. Cancer incidence is increasing alarmingly even though most people lack basic knowledge about cancer. The higher proportion of those affected by cancer is found among the poor, educated and women.

Key words: Cancer, Radiotherapy, Surgery, Chemotherapeutics, Lymphomas, Breast tumour.

INTRODUCTION

Cancer is a renegade system of growth that originates within a patient's biosystem more commonly known as the human body ¹. Cancer is a disease caused by normal cells changing so that they grow in an uncontrolled way. The uncontrolled growth causes a lump called a tumor to form. If not treated, the tumor can cause problem by invading normal tissues nearby or by causing pressure on other body structures². There are many different types of cancer, but all share one hallmark characteristic: unchecked growth that progresses toward limitless expansion. Carcinomas, the most common types of cancer, arise from the cells that cover external and internal body surfaces. Lung, breast, and colon are the most frequent cancer of this type in the United States. Sarcomas are cancer arising from cells found in the supporting tissues of the body such as bone, cartilage, fat, connective tissue and muscle. Lymphomas are cancers that arise in the lymph nodes and tissues of the body's immune system. Leukemia is cancer of the immature blood cells that grow in the bone marrow and tend to accumulate in large number in the blood stream ¹.

The prevalence of CAM use is estimated at 25% among residents of the United Kingdom, 50% among German, French and Australian populations and 42- 69% among residents of the United States⁴. The increasing global interest in CAM among cancer patients is probably due to the limitations of conventional cancer treatment, increased advertisement and dissemination of information through media coverage of CAM and the internet, the desire for holistic or natural treatments of diseases and the creation of a market place for CAM products and practitioners. It may also include the easing labeling regulations on dietary supplement, social acceptance of non-standard medical practices, disillusionment with the way conventional healthcare is delivered, concerns about the adverse effects of chemical medicines and a desire for more personalized healthcare^{3, 5}. The objective of this research study is to observe the occurrence and pattern of distribution of cancer among Nigerian citizens living in Southwestern part of the country.

MATERIALS AND METHODS

The human subjects used for this research study were cancer patients attending Cancer Centers in two tertiary health institutions in Southwestern Nigeria. The Centers were University College Hospital, Ibadan, (Department of Radiotherapy) and Lagos University Teaching Hospital (Department of Surgery). The Surgery

Department at Lagos University Teaching Hospital performs surgical operation to remove cancerous cells from cancer patients and prescribe chemotherapeutics agents to the patients or refer them to the Department of Radiotherapy. The Department of Radiotherapy at the University College Hospital is responsible for treating cancer patients using radiation. The study focused on any tumour type and stage. The human subjects were eighteen years old and above and included both males and females. The consent of every cancer patient that participated in the research study was sought before participation. The participants were assisted on completing parts of the questionnaire that seemed difficult for them to complete.

Approval for the project was obtained from the University of Ibadan/ University College Hospital Health Research Ethics Committee and Lagos University Teaching Hospital.

QUESTIONNAIRE

Both English-speaking and Yoruba-speaking cancer patients who were at least eighteen years of age and reporting to the Department of Surgery at Lagos University Teaching Hospital, Lagos and the Department of Radiotherapy at the University College Hospital, Ibadan between May and July 2008 were invited to participate in the study.

The questionnaire assessed the demographic characteristics of participants, diagnosis, types and treatment of cancer.

RESULTS

The age range distribution of the one hundred (100) cancer patients that participated in this study were 26% for participants that aged between 31-40 years, 41-50 years (25%), 21-30 years (13%), 51-60 years (12%), 61-70 years (12%), 11-20 years (2%) and participants above seventy (70) years (10%) (Table 1) also seventy-five (75%) of the cancer patients were females and 25% were males. Thirty-four (34%) of the cancer patients had secondary education, 22% had tertiary education, 15% had primary education, 14% had post graduate education while 13% had no formal education. Two (2%) did not indicate their level of education.

It also showed that 53% of those that participated in the study were Yoruba, 30% were Igbo and 17% were from other Nigerian tribes. Among those who participated in the study, 85% were Christians, 12% were Muslims while 3% were from other religions. The study

also showed that 65% of those who participated were married, 21% were single, 12% were widowed, 1% was divorced and another 1% was separated. From the study 46% of the participants earned one hundred thousand (100,000) naira and below annually, 20% earned between 100,001 and 300,000 naira annually, 8% of them earned between 300,001 and 500,000 naira per annum while 3% earned more than 500,000 naira a year. Twenty-three (23%) of the cancer participants that enrolled for the study did not specify their annual income range. Only 7% of those that enrolled for the research study had insurance (Table 1).

Table 1 showed that 33% of the cancer patients interviewed was informed of their disease nature in 2007, 24% were informed in 2008, 12% were informed in 2006 while 1% each was informed in 1992, 1996 and 1997 respectively. It showed that 48% of the study population had primary tumour while 20% had cancer at metastatic sites. It also revealed that 37% of the respondents had breast cancer, 17% had head and neck type of cancer, 14% had genitourinary type and 5% had gastrointestinal type while 2% had lung cancer. It was observed that the survival rate might be low but cancer could be managed and the life of the affected individual could be prolonged as 1% of those diagnosed in 1992, 1996 and 1997 were found to still be managing cancer after sixteen (16), twelve (12) and eleven (11) years respectively.

Table 1: Demography and Description of Cancer

VARIABLE	FREQUENCY (n)	PERCENTAGE (%)
AGE GROUP(YEARS)		
11-20	2	2
21-30	13	13
31-40	26	26
41-50	25	25
51-60	12	12
61-70	12	12
>70	10	10
TOTAL	100	100
SEX OF RESPONDENT		
MALE	25	25
FEMALE	75	75
TOTAL	100	100
EDUCATION LEVEL		
NO FORMAL EDUCATION	13	13
PRIMARY EDUCATION	15	15
SECONDARY EDUCATION	34	34
TERTIARY EDUCATION	22	22
POSTGRADUATE EDUCATION	14	14
UNDISCLOSED	2	2
TOTAL	100	100
ETHNICITY		
Yoruba	53	53
Igbo	30	30
Others	17	17
TOTAL	100	100
RELIGION		
Christian	85	85
Islam	12	12
Others	3	3
Total	100	100
AVERAGE ANNUAL INCOME (IN NAIRA)		
0-100,000	46	46
100,001-300,000	20	20
300,001-500,000	8	8
>500,000	3	3
UNDISCLOSED	23	23
Total	100	100
INSURANCE		
YES	7	7
NO	90	90

NO ENTRY	3	3
TOTAL	100	100
YEAR OF DIAGNOSIS		
1992	1	1
1996	1	1
1997	1	1
2002	2	2
2003	2	2
2004	5	5
2005	3	3
2006	12	12
2007	33	33
2008	24	24
UNDISCLOSED	16	16
TOTAL	100	100
TUMOR SPREAD		
Primary tumor	48	48
Metastatic site	20	20
Undisclosed	32	32
Total	100	100
TYPE OF CANCER		
Lung	2	2
Breast	37	37
Genitourinary	14	14
Gastrointestinal	5	5
Head and neck	17	17
Lung + Breast	1	1
Gastrointestinal+ Head & neck	1	1
Others	11	11
Breast + Others	2	2
Head & neck + Others	3	3
Undisclosed	7	7
Total	100	100

Table 2 showed that 16% of the cancer patients in the research study used chemotherapy only, 9% used only radiotherapy and 1% used only surgery. Fifty-one (51%) of the study population used both chemotherapy and radiotherapy while 6% of the respondents used chemotherapy, radiotherapy and surgery together. Also, Table 2 showed that 66% of the participants were coming from home while 20% of them were receiving conventional treatments on ward beds. Ninety-eight (98%) of the respondents received treatment from Cancer Centre while 1% attended palliative care unit and 1% attended both Cancer Centre and palliative care unit.

Table 2: Type of Conventional Treatment, Place of Treatment and Cancer Institute.

VARIABLE	FREQUENCY (n)	PERCENTAGE (%)
TYPE OF CONVENTIONAL TREATMENT		
Chemotherapy	16	16
Radiotherapy	9	9
Surgery	1	1
Chemotherapy+Radiotherapy	51	51
Chemotherapy+ Radiotherapy + Surgery	6	6
Undisclosed	16	16
Total	100	100
PLACE OF TREATMENT		
Inpatient	20	20
Outpatient	66	66
Undisclosed	14	14
Total	100	100
CANCER INSTITUTE		
Cancer Centre	98	98
Palliative Care Unit	1	1
Cancer Centre + Palliative Unit	1	1
Total	100	100

Figure 1: Year of Diagnosis of Cancer

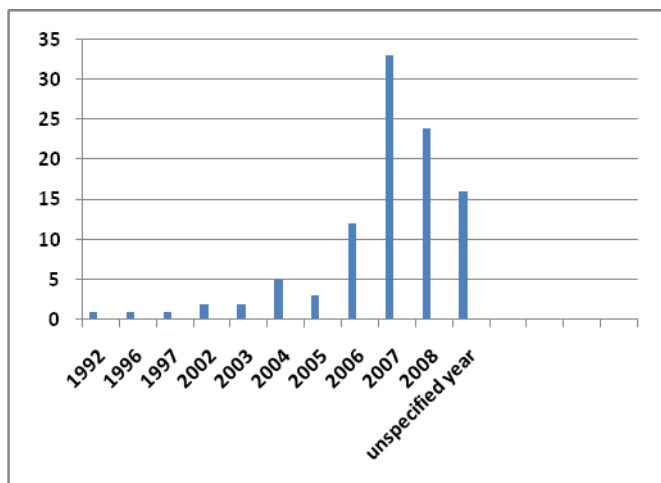
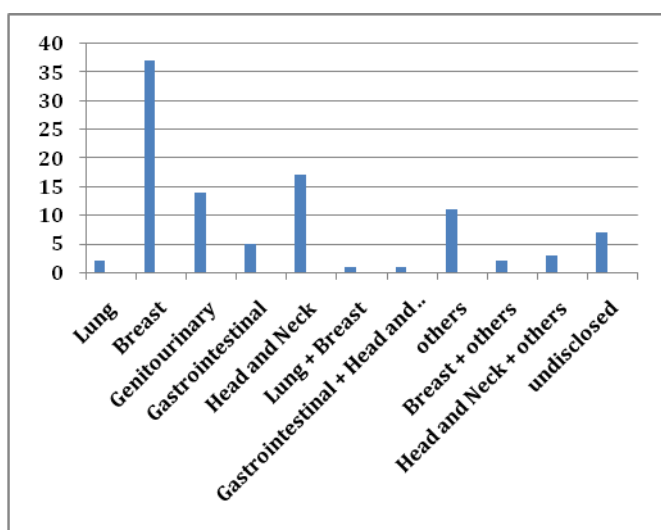


Figure 2: Types of Cancer



DISCUSSION

From this analysis, it was observed that the age range distribution of the respondents was higher for 31-40 years and 41-50 years which correspond to the working class population. For the females, however, this was also the child bearing age. Exposure to hazard like chemicals and radiation at work may be responsible for cancer incidence in men while use of contraceptive and hormonal imbalance may be responsible for this in women⁶.

Table 1 showed the educational status distribution of the respondents. A higher percentage of the patients had secondary and tertiary education. Cancer might have resulted from their exposure to advancement in life like nature of occupation, diet, without observing caution to health management. But there was a lower distribution of cancer among those who had post graduate education. This might be due to observation of appropriate caution to life management as well as increased awareness and curiosity to prolong life among this population^{7,8}.

The ethnic distribution of cancer showed that the disease was more among Yoruba, followed by Igbo, then other tribes. This might not be unrelated to advancement in education, technology, industry and exposure to western diets and culture of the people from these tribes⁹. The percentage of cancer incidence was higher among Christians. This might be because they were more educated and interested in presenting their health problems to physicians. Only 21% of those cancer patients that participate in the study were single, others were married (65%), divorced (1%), separated (1%) or widowed (12%)⁹.

From the study, cancer appeared to have higher distribution among the low income earners, an observation which supports earlier comments from WHO Director-General, Dr. Margaret Chan at the opening of the UICC World Cancer Congress on 27th August, 2008¹⁰. Forty-six (46%) of the respondents earned less than #100,000 per annum while 20% earned between #100,001-300,000. Relatively poor people appeared not to have sufficient funds to keep themselves healthy. Lack of funds for medical bill may be responsible for their use of alternative medicine and late presentation at the Cancer Centre. They found it difficult to settle the bill for diagnostic investigation as well as conventional therapy. Only 7% of the cancer patients included in the study had insurance that could pay part or all medical bills. This implies that people are still ignorant about the use of insurance scheme and this might be due to their low income earning which is not sufficient for their daily living⁹.

The results of the survey also showed that 48% of those who participated in the study had primary tumour while 20% had cancer cells spread to metastatic sites. This implied that some of the cancer patients were ignorant of their disease condition either due to poverty or deceit by false hope from fake medical doctors and trust in non-conventional therapy. This might have resulted in the spread of their primary tumour. The most common type of cancer among the participants was breast cancer (37%), followed by head and neck type of cancer (17%), genitourinary type (14%). The high proportion of breast cancer might be associated with lifestyle changes among the females.

The most common regimen given to the cancer patients at the Cancer Centre was the combination of chemotherapy and radiotherapy. This might be due to the facts that most people did not present the disease early. Some of the cancer patients were earlier wrongly diagnosed and exploited by herbalists and some private medical practitioners before coming to the Cancer Centre. The regimen used at the Cancer Centre was decided by the medical doctors based on the types of cancer cell. Most of the cancer patients receiving treatment at the Cancer Centre came from home. Only few of the advanced cancer patients were admitted to the ward for proper monitoring.

CONCLUSION

Cancer incidence is increasing alarmingly even though most people lack basic knowledge about cancer. The higher proportion of those affected by cancer is found among the poor, educated and women.

The governments, agencies and individuals involved in policy making are therefore advised to increase public awareness of cancer through inclusion in educational curriculum, print and electronic advertisements as well as providing financially-supported treatments for cancer patients.

REFERENCES

1. National Cancer Institute. Understanding Cancer and Related Topics. Understanding Cancer pg 1-63, <http://cancer.gov/cancertopics/understandingcancer>. kerrigad@mail.nih.gov, beankelly@verizon.net
2. Cancer Research UK. Cancer Help UK: What cancer is. Cancer Research 2007 UK Charity Number 1089464.
3. Burstein HJ. Discussing Complementary Therapies with Cancer Patients: What Should We Be Talking About? J.Clin Oncol. 2000; 18, (13): 2501 - 2504.
4. Richardson MA, Sanders T, Palmer J.L. Complementary/Alternative Medicine Use in a Comprehensive Cancer and the Implications for Oncology. J. Clin. 2000; 18 (13), 2505 - 2514.
5. Tascilar M, De Jong FA, Verweij J. Complementary and Alternative Medicine During Cancer Treatment: Beyond Innocence: The Oncologist. 2006; 11(7) 732-741.
6. Young LY, Koda-Kimble MA. Applied Therapeutics: The Clinical Use of Drugs. Six Editions. Baltimore: Lipincott Williams & Williams, 2000.p. 90: 9-22.
7. Tarlov E, Kaestner R, Warnecke R. Educational Attainment and Cancer Mortality, 1959-2001: Patterns, Trends and Pathways.

- Academy Health Meet. 2005; 22:3365.
<http://gateway.nlm.nih.gov/MeetingAbstracts>.
8. Decker S. The Cornell Daily Sun
<http://cornellsun.com/node/2189>, 2007.
 9. Freeman H.P. Poverty, Culture and Social Injustice: Determinants of Cancer Disparities. *CA Cancer J. Clin.* 2004; 54: 72-77.
 10. Chan M. The Face of Cancer Is Changing. WHO Director General Comment at the Opening of UICC World Cancer Congress. Geneva. zhangx@who.int, 2008.