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Complementary and alternative medicine. Use and challenges among gynaecological cancer patients in Nigeria: experiences in a tertiary health institution - preliminary results

T.O. Nwankwo, L. Ajah, I.V. Ezeome, U.A. Umeh, U.U. Aniebue

Department of Obstetrics and Gynaecology, Faculty of Medical Sciences, University of Nigeria, Nsukka (Nigeria)

Summary

Background: Cancer patients have keyed into increasing global interest in the use of Complementary and Alternative Medicine (CAM). There are few studies on CAM use among gynaecological cancer patients in our environment. *Objective:* To determine the prevalence, pattern and challenges of use of CAM among gynaecological cancer patients in UNTH Enugu, Nigeria. *Materials and Methods:* This is a descriptive cross sectional study of gynaecological cancer patients seen in a referral tertiary centre in Nigeria. Data was extracted using semi-structured questionnaires and analysed with software for SPSS version 17 using descriptive and inferential statistic. A p value ≤ 0.05 was deemed statistically significant. *Result:* The mean age of 95 patients studied was 50.9 ± 11 years with CAM use prevalence of 64.3%. The majority (73.8%) used herbal medicine and in 60.7% recommendation was by friends and relatives. Cancer of the cervix was commonest (44.2%) followed by ovarian (32.6%). Most (75%) CAM users reported delayed presentation to hospitals. Longer duration of illness and monthly income less than expenditure were significant factors among CAM users ($p = 0.00002$ and $p = 0.02$ respectively). Those that had recommendation of CAM by friends and relatives significantly experienced delayed presentation ($p = 0.0017$). *Conclusion:* CAM use was common among gynaecological cancer patients with herbs bring predominantly used in this environment. Respondents whose monthly income was less than their expenses and those whose duration of illness were longer at the point of diagnosis were significantly common users of CAM. CAM use was likely to be abused, hence physicians should inquire into CAM use and offer insights, potential benefits, and adversities of CAM to their patients.

Key words: Complementary and alternative medicine; Gynaecological cancer.

Introduction

There has been an increasing interest on the use of Complementary and Alternative Medicine (CAM) on a global level. Cancer patients have keyed into this and have been involved in the use of traditional therapies for varied reasons [1, 2]. The pioneer work in this regard began in 1997,but its use probably dates back to before the onset of orthodox medicine. Cancer is one of the commonest causes of death due to non-communicable diseases. About 14.1 million new cases and 8.2 million deaths occurred in 2012, with 57% of new cases and 65% of cancer related deaths occurring in less developed regions [3-4]. The poor survival of cancer patients may fuel the rising interest of such patients in seeking and using alternative medicine. Those who use CAM perceive a higher risk of death or reoccurrence of disease [5]

The term complementary or alternative medicine is used interchangeably with traditional medicine in some countries and it refers to a set of healthcare practices that are not part of that country's tradition and are not integrated into dominant healthcare systems [6]. Another literature attempted separation of CAM into complementary and alternative treatment; complementary therapy being referred to as a range of approaches to care aimed at enhancing quality of life and improving well being that are generally used in conjunction with conventional medical treatment, while alternative therapies are treatment offered as alternative to conventional treatment. [7]

The prevalence of CAM use among cancer patients varies among countries. Average prevalence of 35.9% with a range of 14.8-73% has been reported in an European surveys [2]. In Nigeria, a prevalence of 60% was reported among patients with solid tumors, while a prevalence of 47.3% was reported in Turkey [8]. Nazik *et al.* reported a high prevalence of CAM use among gynaecological patients [9].

The various type of CAM used by cancer patients include herbs, traditional remedies, nutritional modification, dieting, psychological and spiritual therapy, high dose vitamins, traditional Chinese medicine, acupuncture, electromagnetic therapy, and relaxation homeopathy [5, 8]. Varying levels of treatment satisfaction and effectiveness have been reported by user, though challenges of acceptability and integration into conventional medical practice

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still abound. Furlow *et al.* in their study in USA reported 73.8% of physicians surveyed showed more positive attitude toward CAM against 40.8% among patients [10].

In Africa many medicinal plant products are assumed and promoted as completely safe and natural but many are potentially toxic [11]. Some Nigerian herbal leaves have been documented to show cytotoxic activity comparable to base compound cisplatin and hence tend to justify the use of such drugs in cancer management [12]. The active substance in these agent however are mostly unknown. Standardization and quality control though feasible may not be easy. Properly conducted standard clinical trials to determine toxicity, side effects, efficacy, and safety are lacking; many of these agents are self-prescribed and may contain potential toxic agents that may be lethal [13].

Molassiotis *et al.* reported that with cancer diagnosis, the use of CAM tripled [2]. The characteristics of most users were females, of higher income group, advanced age of diagnosis and are likely to be using multiple chemotherapeutic agents [5, 14, 15]. Some researchers however did not find any difference in age, educational level, social status, work, and diagnosis [2, 8]. Delayed presentation or presentation in advanced stage of cancer is a common problem of gynaecological patients in the present environment. There is paucity of studies on the use of CAM among gynaecological cancer patients in the present sub-region and its potential contributions to the problem of late presentation.

This study aims at determining the prevalence, pattern, and challenges of CAM use among gynaecological cancer patients seen in University of Nigeria Teaching Hospital Enugu, Nigeria. The demographic characteristics of users and influence of use of CAM towards accessing orthodox medical care are shown in Table 1.

Materials and Methods

This was a hospital-based prospective and descriptive cross-sectional study involving consecutive consenting gynaeological cancer patients seen at University of Nigeria Teaching Hospital over a period of two years (June 2014 to June 2016). University of Nigeria teaching hospital, located in Enugu, Enugu state of Nigeria, is the oldest tertiary hospital in the Eastern part of the country and received gynaecological cancer referral from the region and beyond. Data were collected using semi-structured questionnaires and some data were extracted from patients' folders. The questionnaire was adapted from that used in previous study in the institution among core surgical patients [8]. Information contained in the questionnaire included demographic data such as age, parity, marital status, educational attainment, occupation, place of dwelling, etc. Information on the type, duration, and stage of cancer were also extracted. Information on delays in seeking orthodox medical treatment and experienced side effects as a result of CAM use were also inquired on. A CAM user was defined as a patient who has used any of the CAM identified at least once during the illness. These CAM include herbal preparation, nutritional or dieting interventions, spiritual consultations, prayers, etc. Ethical clearance was obtained from the ethical board of the University of Nigeria Teaching Hospital, Ituku-Ozalla, Enugu. Data were computed and analyzed using the statistical Package for social sciences (SPSS) version 17. Descriptive and inferential sta-

Table 1. — *Demographic characteristic of respondents.*

Characteristics	Frequency	Percentage
Age (years)		
21-30	2	2.1
31-40	17	17.9
41-50	27	28.4
>50	49	51.6
Marital Status		
Single	13	13.7
Married	77	81.1
Divorced /separated	5	5.3
Religion		
Christianity	93	97.8
Moslem	2	2.2
Education status		
Primary/non formal	44	46.3
Secondary	28	29.5
Tertiary	23	24.2
Occupation		
Trader	37	38.9
Artisan/farmer	23	24.2
Professional/Civil servant	18	19.0
Unemployed	17	17.9
Income /Monthly expenses		
Income < monthly expenses	59	62.0
Income =/>monthly Expenses	36	38.0
Place of residence		
Urban	63	66.3
Rural	32	33.3

Table 2. — *CAM use and clinical/patients characteristics.*

Characteristics	CAM Use		
	Yes (%)	No (%)	*p* value
Gynaecologic cancer patients	61 (64.3)	34 (35.8)	—
Duration of illness			
Less than/equal 6 months	16 (48.5)	17 (51.5)	
Greater than 6 months	45 (72.6)	17 (27.4)	0.018
Diagnosis			
Cervical cancer	31 (73.8)	11 (26.2)	
Ovarian cancer	19 (61.3)	12 (38.7)	
Endometrial cancer	3 (37.5)	5 (62.5)	
Vulval cancer	4 (80)	1 (20)	
Choriocarcinoma	2 (50)	2 (50)	
Leiomyosarcoma	2 (50)	2 (50)	
Stage of diagnosis			
Early stage (1&2)	16 (64)	9 (36)	0.58
Advance stage (3&4)	45 (64.3)	25 (35.7)	
Disease status			
Primary	55 (65.5)	29 (34.5)	0.52
Recurrent/resistant	6 (54.5)	5 (45.5)	
Level of income			
Income less than monthly expenses	47 (79.6)	12 (20.4)	0.0003
Income greater or equal to monthly expenses	13 (36)	23 (64)	

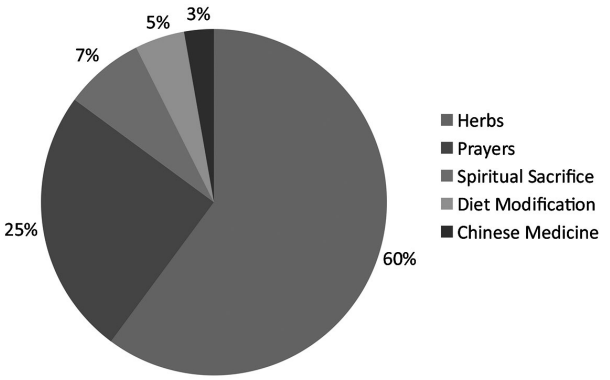

Figure 1. — A pie chart showing pattern of CAM use.

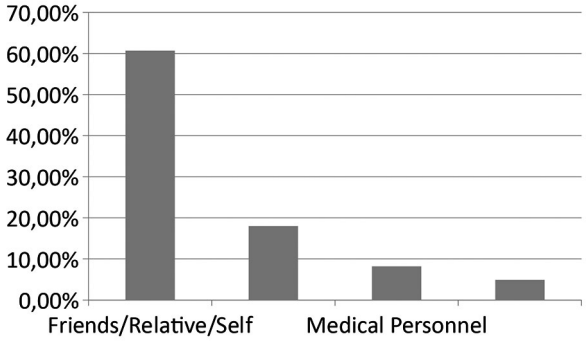

Figure 2. — A bar chart showing sources of recommendation of CAM.

tistics were used where appropriate. Pearson Chi Square and fisher exact test were used to determine significance. A p value of ≤ 0.05 was deemed statistically significance.

Result

Table1 shows the demographic characteristics of respondents. A total of 95 gynaecological cancer patients were surveyed. The mean age of respondents was 51 ± 11 years. Seventy-seven (81.1%) were married and 13.7 % were single; 93(97.8%) were Christians and only 2(2.2%) were Muslims. Trading was the commonest occupation (38.9%) while others included artisans (24.2%), professional, and senior civil servants (18.9%). Seventeen (16.9%) were unemployed, 44 (46.3%) had primary or non-formal education, 28 (29.5%) and 23 (24.2) had secondary and tertiary educational attainment, respectively. Majority (66.3%) dwelled in urban area, while 33.7% were rural dwellers.

Table 2 shows the prevalence of CAM use, clinical, and users characteristics. Cervical cancer (44.2%) was the predominant malignancy followed by ovarian (32.6%); the least were leiomyosarcoma and choriocarcinoma at 4.2% each.

The majority (64.5%) of gynecological cancer patients used CAM, while 35.5% did not. Forty-seven (79.6%) of those respondents whose monthly income was lower than projected expenses used CAM as against only 13 (36%) of those whose monthly income was equal or higher than their expenses. This difference was statistically significant. The use of CAM was also found to be more common (72.6%) among respondents whose duration of illness was greater or equal to six months than those (48.5%) whose duration of illness was less than six months [(p value = 0.02, OR = 0.36 (0.15-0.86)]. There was no statistically significant difference among CAM users based on educational status, type or stage of cancer, and place of residence.

Figure 1 shows the pattern of CAM used. The commonest type of CAM used was herbs in (45/61) 73.8% of cases. Others includes spiritual sacrifice (13.2%), diet modification 5.3%, and Chinese medicine 4.9%. Twenty-seven (44.3%) respondents used prayers, though this was combined in some instances, with other choices. Twenty-eight (62.2%) of those that took herbs indicated using leaves or bark of a tree or shrubs which they did not know their names. A locally popular elixir, branded variously but contained several herbs such as Aloe-vera, Acinos Arventis, Citrus Aurantifolia, Chenopodium Murale, Cinnamomum Aromatic, vernonia-amygdalina, sacchararum offcinarum, and cajanus cajan was used by 21.6%

Figure 2 is a histogram showing sources of CAM recommendations. The majority (37/61, 60.7%) received suggestion by friends and relatives or just initiated treatment by themselves. Herbalists and medical personnel were the sources of prescription only in 18% and 8.2% of cases, respectively. The aim of CAM use was to cure cancer in majority (50.8%) of cases, 19 (31.2%) of users aimed at stopping vaginal bleeding, 7 (13.1%) aimed at enhancing their body immunity, while achieving psychological well being was the main objective in 4.9% of cases. Forty-six (75.4%) indicated that the use of CAM made them to delay presentation for conventional medical treatment. The duration of illness was equal or greater than six months in 69.6% (32/46) of those affected. Delay in seeking conventional medical therapy was more common among users that had recommendation from friends and relatives compared to those by medical personnel (p value = 0.017, $\chi^2 = 9.9$).

Thirteen (21.3%) of respondents that use CAM indicated having experienced at least one side effect or the other. Commonest side effect was nausea and vomiting reported by six respondents, headache and diarrhea by three respondents, respectively, while abdominal pains and skin burns were reported by two and one respondents, respectively.

Discussion

This study found a high prevalence (64.1%) of CAM use among gynaecological cancer patients managed at UNTH. This was quite similar to high prevalence (65%) of use reported in the present institution among somewhat different populations of general surgical patients by Ezeome *et al.* [8]. This finding is also similar to 61.2% rate of use of CAM reported by Nazik *et al.* among gynaecological oncology patients in Turkey [9]. This was however higher than the 38.5% rate of use reported by another study by Yildirim *et al.* in the same country [16]. It was also higher than 49.6% and 40.3% reported by Swisher *et al.* in USA and Molassiotis *et al.* in multiple European countries study among gynaecological cancer patients, respectively [2,17]. The CAM use prevalence in this study is also higher than 35.9% and 49% reported by cancer patients in Iran and Wales, respectively, but less than 97% reported in Mexico [1, 18, 19].

Herbs was the predominant CAM used by gynaecological oncology patients in this study and this collaborated earlier study in the present environment but among cancer patients in general. The predominance of herbal use among gynaecological cancer patients found in this study agreed with the report by Molassiotis *et al.* of 35.5% but was of much higher rate [2]. The present findings was however lower than 90.2% and 95% of use of herbs reported by Nazik *et al.*, Ozlem *et al.*, and Tas *et al.,* respectively [9, 14, 15]. This finding of predominant use of herbs however contrasted to predominantly use of nutritional supplements reported by Leingacher *et al.* [20], and Prayer and Spiritual healing by Montazeri *et al.* [1]

It may be pertinent to mention that this study found that most of the CAM used were not prescribed by professional herbalist but were mainly recommended by friends and relatives; hence this was prone to abuse. This finding collaborated report from other studies in Turkey, Malaysia, and USA [9, 10, 21]. Most of the respondents did not know the names of the herbs. This underscored the concern for use of potential toxic compounds that may worsen the clinical conditions being treated. As noted in the introduction, even those herbal agents prescribed by herbalists may be uncharacterised and of doubtful potency and efficacy [11]. Few reported experience of side effects though none was life threatening. The commonest gynaecological cancers among CAM users were cervical and ovarian, this however reflects the pattern of gynaecological cancer prevalence reported in developing countries [22].

Respondents with income less than monthly expenditure and gynaecological cancer patients with duration of illness of equal or greater than six months were found to be significant CAM users in this study. Swisher *et al.* and Tas *et al.* however found that CAM use was more common among gynaecological cancers patients with greater annual income than those whose annual income were lesser [14, 17]. Being female, advanced age at diagnosis, use of multiple chemotherapeutic agents were also noted to be statistically significant common users of CAM by the same authors [14, 17].

It may be interesting to note that 75.4% of those respondents who used CAM in this study reported that seeking and commencement of conventional oncology treatment was delayed by about six months or more. This is most likely one of the contributors of the challenges of late presentation of gynaecological cancers in the present environment. This however has not been reported in the literatures searched.

The limitations of this study comprised single institutional based, being questionnaire-based, had potential for recall biases. The present authors recommend broader multicentric studies whose finding may likely reflect the situation of the larger community.

In conclusion, CAM use was common among gynaecological cancer patients in this environment. Respondents whose monthly income was less than their expenses and those whose duration of illness were longer at the point of diagnosis were significantly common users of CAM. The use of CAM was likely to be abused because friends and relatives were the commonest recommenders rather than professional herbalists and physicians. Gynaecological cancer patients that used CAM were likely to delay presentation for conventional evaluation and treatment. Physicians involved in gynaecological cancer treatment should inquire into CAM use and where necessary, offer insights, potential benefits, and adversities of CAM use. There is need for community sensitization on the potential harmful effects of CAM use among gynaecological cancer patients in this environment. The government should ensure proper regulation of CAM, especially herbs and nutritional supplements use in this region. Only when the follow up of the patients is completed will we have definite information to establish the real value of CAM.

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Corresponding Author:
T.O. NWANKWO, M.D.
Department of Obstetrics and Gynecology
University of Nigeria Nsukka, Enugu Campus
Enugu, Enugu State
(Nigeria)
e-mail: theophilus.nwankwo@unn.edu.ng