

Complementary and alternative medicine use among the cancer patients in Northern India

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Abstract

Background: Cancer has emerged as a major public health problem. People often turn to complementary and alternative medicine (CAM) when they have a long-lasting problem. CAM is a group of diverse medical and healthcare systems, practices, and products that are not generally considered part of conventional medicine. The present study was conducted to find prevalence rate of CAM use among cancer patients undergoing allopathic treatment in a health facility and to compare the CAM usage patterns among different subgroups of patients at different stages. Further to investigate some psychosocial, cultural, and demographic correlates/predictors of CAM use. **Materials and Methods:** Present hospital-based cross sectional study was conducted among cancer patients attending Radiotherapy Outpatient Department (OPD) of a Government Medical College and Hospital (GMCH). A total of 1,117 cancer patients participated in the study. Statistical methods like normal test of proportions, Chi-square (χ^2) test, logistic regression analysis for estimation of risk factors of CAM use were applied to carry out the data analyses using Statistical Package for Social Sciences (SPSS)-16 software package. **Results:** The most common CAM therapy in use was found to be ayurvedic treatment reported by 187 (16.7%) patients. Overall CAM use was found to be 38.7%. Sixty percent of patients who were aware of CAM were not using CAM, only 40% aware were using CAM. Low socioeconomic status contributed maximum to proportions of CAM use; wherein out of all users, 175 (40.5%) patients were using CAM. Maximum degree of relief was found due to homeopathic treatment (78.4%). Reasons of using CAM therapies reported by the users were mainly on the advice of family members or friends (23.1%). **Conclusions:** There is an urgent need of conducting further in-depth epidemiological studies to evaluate the efficacy of various CAM therapies in use for cancer. The high utilization of CAM among cancer patients and nondisclosure proportions suggests prioritizing research investigating reasons to use CAM and efficacy and safety of CAM use.

Key words: Cancer, complementary and alternative medicine, India

Introduction

Cancer has emerged as a major public health problem in developing countries, matching its effect in industrialized nations. India is in epidemiological transition phase and cancer is now one of the leading causes of morbidity and mortality. People often turn to complementary and alternative medicine (CAM) when they have a long-lasting problem that conventional medicine has not completely cured. CAM is a group of diverse medical and healthcare systems, practices, and products that are not generally considered part of conventional medicine. CAM is defined as “diagnosis, treatment, and/or prevention which complements mainstream medicine by contributing to a common whole, by satisfying a demand not met by orthodoxy or by diversifying the conceptual frameworks of medicine”.^[1]

In India, there is a high degree of reliance and cultural acceptability of Ayurveda medicine in favor of traditional systems of medicine. A separate department for Indian Systems of Medicine and Homeopathy (ISM and H) now known as AYUSH (Ayurveda, Yoga, Unani, Siddha, Homoeopathy) was established in March 1995 to promote indigenous systems.

The recent increase in the interest and growth CAM can be attributed to many reasons including technological, economic, cultural, and social trends. Additionally, the internet access to alternative medicine can also be attributed to increased use of CAM. Herbal medicine is still the mainstay of about 75–80% of the world population, mainly in developing countries, for primary healthcare.^[2]

The use of CAM is not restricted to developing countries. The number of patients seeking alternate and herbal therapy is growing exponentially.^[3] It has been estimated that two-thirds

of the world’s population seek healthcare from sources other than conventional biomedicine.^[4] A systematic review of studies assessing its prevalence in 13 countries concluded that about 31% of cancer patients use some form of CAM.^[5] A lot of emphasis is being given to CAM; however, many questions remain regarding the proper use of CAM, particularly in regard to dosage and contaminants. At present much CAM is still opinion based. Many providers of CAM argue that it is individualized, holistic, intuitive, etc., and call for a “paradigm shift” in research.

Many consumers use traditional medicine as self-care because there is a wide misconception that “natural” means “safe”. Blind use of CAM by patients may confuse their treating doctors, which may affect diagnostic and treatment decisions resulting in misleading or unknown treatment outcomes. Beneficial effects associated with CAM, if any, should also not be ignored without scientific evaluation.

There are few clinical studies to evaluate the importance and efficacy of various CAM therapies tried by Indian patients. Evidence-based CAM if integrated properly with mainstream medicine can play an important role in cancer management in India.

The present study was conducted to find prevalence rate of CAM use among cancer patients undergoing allopathic treatment in a health facility and to compare the CAM usage patterns among different subgroups of patients at different stages. Further to investigate some psychosocial, cultural, and demographic correlates/predictors of CAM use.

Materials and Methods

The study was conducted at Government Medical College and Hospital (GMCH), a tertiary healthcare facility in Chandigarh (UT), North India during June 2012–May 2014 to investigate CAM usage patterns among cancer patients and also to explore opinions of cancer patients.

Setting

Present hospital-based study was conducted among cancer patients attending Radiotherapy Outpatient Department (OPD) of a GMCH, a tertiary healthcare facility in Chandigarh (UT), North India.

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Participants

Patients undergoing allopathic treatment for cancer and their family members/close relatives attending the health facility were interviewed.

Sampling design

A systematic sampling design was adopted to select patients attending the health facility. There were about 40–50 patients attending the OPD every day. Among them only new patients were included in a systematic manner selecting every third patient with a random start every day. Patients revisiting the OPD were excluded while selecting the sample.

Study design

A cross-sectional study design was adopted among patients of different types of cancer at different stages approaching for allopathic treatment at the health facility.

Information collected/study variables

Patients suffering from cancer and/or their closed family members and healthcare providers served as respondents. They were interviewed to collect information regarding personal and family characteristics, beliefs and practices related with CAM, sources of CAM awareness, perceived reliefs/benefits of CAM use, and positive and negative motivations concerning CAM.

Optimum sample size

Power analysis was done to calculate optimum sample size for the proposed study. Sample size was calculated by using the following formula with approximation for large population:

$$n_{\text{opt.}} = \frac{Z^2_{1-\alpha/2} (1-P)}{\epsilon^2 P}$$

where

P = anticipated population proportion

$1-\alpha$ = confidence coefficient

ϵ = relative precision, and

$Z(\cdot)$ is the value of standard normal variate

On the basis of 60% CAM use as primary outcome parameter anticipated on the basis of a pilot survey findings and assuming 95% confidence coefficient and 5% relative precision (not an absolute precision), optimum sample size of 1,024 cancer patients was obtained. This study covered a sample of 1,117 cancer patients.

Ethical issues

Ethical Guidelines of ICMR (2006) on human participants were followed.^[6] A written informed consent was taken from

the patients. Approval from Institutional Ethics Committee was taken for conducting the study.

Statistical methods

Statistical methods like normal test of proportions, Chi-square (χ^2) test, logistic regression analysis for estimation of risk factors of CAM use, analysis of variance (ANOVA) technique, etc., were applied to carry out the data analyses using Statistical Package for Social Sciences (SPSS)-16 software package.

Results

It is evident from the results of the study that patients were aware about a variety of CAM therapies. Maximum awareness was found for yoga/meditation (86.5%) followed by ayurvedic (85.2%) and homoeopathic treatment (73.9%) [Table 1].

CAM therapy's usage pattern among males was found to be the highest for Ayurveda (18.8%) followed by spiritual therapy (12.6%) and yoga/meditation (11.6%); whereas, among females, user rates of these therapies were reported to be 15.5, 13.1, and 13.1% respectively. The most common CAM therapy in use was found to be ayurvedic treatment reported by 187 (16.7%) patients [Table 1]. Overall CAM use was found to be 38.7% with 39.3% among males and 38.1% among the females and difference being nonsignificant ($P > 0.20$). Sixty percent of the patients who were aware of CAM were not using CAM, only 40% aware were using CAM.

Among nonusers, 381 (55.6%) were females as compared to 235 (54.4%) females among users. Maximum percentage of CAM users was recorded among elderly patients, wherein 141 (33.6%) users were reported. Low socioeconomic status contributed maximum to proportions of CAM use; wherein out of all users, 175 (40.5%) patients were using CAM. Larger proportions of CAM users (16.0%) were reported among those having family history of cancer as compared to that among nonusers (13.7%). Among CAM users, breast cancer contributed 19.4% cases, while head and neck cancer contributed 10.0% cases.

Maximum degree of relief was found due to homeopathic treatment as reported by 78.4%. Relief felt by ayurvedic treatment and by naturopathy/herbal treatment was found equal by their respective users (51.9%). In spite of lower percentage of patients feeling relief among CAM users, 91.1% patients intended to use CAM in future. Intended CAM use in future was reported by 92.4% CAM users and 90.4% nonusers.

Table 1: Respondents by awareness vs practice vs relief felt among different CAM therapies

CAM therapy	Awareness	Practice	Practice among aware (%)	Relief felt among users (%)	
Spiritual therapy/prayer and faith healing	462	144	31.2	5	3.5
Ayurvedic treatment	952	187	19.6	97	51.9
Yoga/meditation	966	139	14.4	6	4.3
Naturopathy/herbal treatment	246	22	8.9	13	51.9
Laughter therapy	345	29	8.4	0	0
Physiotherapy	124	8	6.5	1	12.5
Unani	205	12	5.9	0	0
Homeopathic treatment	825	37	4.5	29	78.4
Acupuncture	242	10	4.1	0	0
Psychological therapy	98	4	4.1	0	0
Siddha	34	1	2.9	0	0
Overall	1080	432	40.0		

CAM=Complementary and alternative medicine

Reasons of using CAM therapies reported by the users were mainly on the advice of family members or friends (23.1%) followed by self-desire (16.7%), whereas considerable proportion of reasons remained unspecified (60.0%). About 72% patients reported that they were not having any prior knowledge of CAM therapies which they used. Only in about 23% cases CAM therapies were provided by professional practitioners or their staff and in majority of cases the providers were not specified by respondents.

Closer to nature (64%), easy availability (62.9%), noninvasive (60.8%), and inexpensive (57.4%) were main positive motivations regarding CAM therapies by the patients. No guarantee for safety (63%), ineffective for certain conditions (59%), herbal medicines are not very herbal (58%), and lack of scientific evidence (55.7%) were the main negative motivations regarding CAM usage [Table 2].

On the basis of logistic regression analysis, CAM use was found prevalent irrespective of sociodemographic characteristics of patients.

Discussion

Present study was conducted to explore the actual usage pattern of CAM by cancer patients undergoing allopathic treatment at a tertiary healthcare facility in Chandigarh (UT) and also to investigate their misunderstandings/misconceptions using a multifactorial approach. The study concluded that there was high degree of awareness and practice of CAM among cancer patients irrespective of their sociodemographic characteristics, type of cancer, etc. Among 1,117 new cancer patients surveyed; 501 (44.9%) males and 616 (55.1%) females were referred from different types of hospitals. Overall CAM use was found to be 38.7% (39.3% among males and 38.2% females) against overall awareness of 96.7% (97.4% for males and 96.1% for females) for at least one CAM. Gap between awareness and practice was found to be 58.0%.

Use of CAM in Indian community is reported quite common in the existing literature. High prevalence of CAM use was found (67.7%) among all participants, and 95% among participants aware of CAM, mostly using 'naturopathy'

Table 2: Perception of respondent's positive and negative motivations regarding CAMtherapies

	Male (N=501)		Female (N=616)		Total (N=1,117)	
	No.	(%)	No.	(%)	No.	(%)
Positive Motivations						
Closer to nature	311	62.1	404	65.6	715	64.0
Easily available	326	65.1	377	61.2	703	62.9
No side effect/noninvasive	308	61.5	371	60.2	679	60.8
Inexpensive	287	57.3	354	57.5	641	57.4
CAM are blessings of God	287	57.3	324	52.6	611	54.7
CAM providers give sufficient time to patients	271	54.1	337	54.7	608	54.4
Has spiritual touch/dimensions	263	52.5	330	53.6	593	53.1
More acceptable	249	49.7	326	52.9	575	51.5
As per social traditions/customs	248	49.5	290	47.1	538	48.2
Based on long therapeutic experiences	255	50.9	282	45.8	537	48.1
No modern medicine exists for cancer	249	49.7	286	46.4	535	47.9
Gives hope for life when no hope of life is left	241	48.1	289	46.9	530	47.4
Manageable by individual patients	236	47.1	286	46.4	522	46.7
More emphasis on holism	233	46.5	288	46.8	521	46.6
Safer than allopathic medicines	229	45.7	258	41.9	487	43.6
Establishes good patient-therapist relationship	229	45.7	243	39.4	472	42.3
More effective	218	43.5	241	39.1	459	41.1
For quick and additional relief	92	18.4	87	14.1	179	16.0
Others	14	2.8	14	2.3	28	2.5
Negative Motivations						
No guarantee for safety	312	62.3	392	63.6	704	63.0
Ineffective for certain conditions	281	56.1	378	61.4	659	59.0
Herbal medicines arenot very herbal	303	60.5	345	56.0	648	58.0
Lack of scientific evidence	292	58.3	330	53.6	622	55.7
No knowledge of side effects	292	58.3	306	49.7	598	53.5
Lack of good quality research inAyurveda	281	56.1	310	50.3	591	52.9
Not complete cure	268	53.5	296	48.1	564	50.5
Miraculous cures claimed not attained	237	47.3	312	50.6	549	49.1
Unproven medical benefits	241	48.1	308	50.0	549	49.1
Reject science and technology	217	43.3	295	47.9	512	45.8
Fake doctors are unlearned in scriptures, experience, and knowledge	238	47.5	271	44.0	509	45.6
High tech, but low touch	213	42.5	287	46.6	500	44.8
False labeling of drugs	216	43.1	248	40.3	464	41.5
Dubious use of animal products/nonvegetarian ingredients in these products	175	34.9	232	37.7	407	36.4
Heavy toxic materials in ayurvedic medicines	169	33.7	229	37.2	398	35.6
Others	4	0.8	10	1.6	14	1.3

CAM=Complementary and alternative medicine

(97.3% among users). A study conducted by the Indian Council of Medical Research (2007) of 45,000 people found that 33% used TCAM for 'common ailments', while only 18% preferred to use this system for serious ailments.^[7] A study based on data collected in a structured survey of cancer patients in a private and a public hospital in Delhi, reported 34.3% of patients used TCAM representing a significant proportion of the population.^[8]

Overall CAM awareness in the present study was found to be 96.7% among all surveyed, overall CAM use was found to be 38.7% including 39.3% among males and 38.2% among females. Sixty percent of patients who were aware of were not using CAM, only 40% aware were using CAM. Reasons of using CAM therapies reported by users were mainly on advice of family members or friends (23.1%) followed by self-desire (16.7%) as found in the present study. In terms of cancer, until now there has been little data available regarding patient usage of TCAM, although estimates have suggested usage may be around 38%.^[9]

Overall CAM use was found to be 38.7% in the present study. Similar results have been shown by Chaturvedi *et al.*, in a Delhi found that 38% had visited practitioners who offered alternative treatments before going to the hospital.^[10] The prevalence of CAM use was found to be 14% among cancer patients in Malaysia.^[11] In a World Health Organization (WHO) report, 62% of adults used some form of CAM therapy during the past 12 months when the definition of CAM therapy included prayer specifically for health reasons. When prayer specifically for health reasons was excluded from the definition, 36% of adults used some form of CAM therapy during the past 12 months.^[12]

Some opinions against CAM in our study were, no guarantee for safety (63.0%), ineffective for certain conditions (59.0%), herbal medicines are not very herbal (58.0), lack of scientific evidence (55.7%), no knowledge of side effects (53.5%), and lack of good quality research in Ayurveda (52.9%) were observed. There is a broad range of interacting positive and negative motivations found in the literature also.^[13]

Conclusions and suggestions

Large gaps were observed between knowledge and practice of CAM in the present study. Financial constraints and family problems came out to be major barriers for continuation of treatment with conventional treatment of cancer. There is an urgent need of conducting further in-depth epidemiological

studies to evaluate the efficacy of various CAM therapies in use for cancer. The high utilization of CAM among cancer patients and nondisclosure proportions suggests prioritizing research investigating reasons to use CAM and efficacy and safety of CAM use. Detailed studies on CAM use by cancer patients should be conducted for better understanding and evaluation of holistic approach for care of cancer patients in Indian set-up. More active participation from CAM providers/healers is desired to attain some logical conclusions.

Limitations of study

The main weakness of our study is that it is a hospital-based survey; thereby excluding patients who have abandoned conventional treatment completely or never used it at all and does not represent CAM use in the community.

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