

Study of the Use of Traditional, Complementary, and Alternative Medicine in Indian Cancer Patients

Abstract

Objectives: The use of alternative forms of medicine is well known in India, especially amongst cancer patients but there are very few studies that have investigated its usage and benefits. A study was conducted to determine the prevalence of the use of Traditional medicine, Complementary and Alternative Medicine (CAM) by cancer patients visiting a cancer care center. This study laid an emphasis on the predictors of use of CAM. **Materials and Methods:** This is an observational study conducted from March 2017 to May 2017 at a tertiary cancer care center. After obtaining informed consent, patients were handed a questionnaire and their responses were analyzed. Data analysis tools of Microsoft Office Excel 2007 were used for statistics. **Results:** A total of 407 patients took part in the study. The prevalence of traditional medicine and CAM was found to be 23.5% (96 patients). The mean duration of CAM use was 4.8 months (0.25 months–48 months). About 77% of the users had an education level below the upper primary level, of which 30.02% were illiterate. About 62.5% of the users were below poverty line. Nearly, 41.7% of the patients had not received any allopathic treatment before starting traditional medicine and CAM and did so for a mean duration of 4 months. About 53% of the patients who received some form of traditional medicine and CAM claim to have experienced some symptomatic benefits from its use. Nearly, 68.75% of the users were simultaneously receiving conventional anticancer therapy. Traditional medicine and CAM use was disclosed to the treating physician by 55% of the patients. **Conclusion:** Traditional medicine and CAM use have been shown to have a high prevalence among the less-educated and the economically backward sections of the society. There is not sufficient data to support the effectiveness and safety of traditional medicine and CAM. physicians have to acknowledge the increasing incidence of traditional medicine and CAM use in the population and actively inquire and educate the patients on its use.

Keywords: Cancer, complementary and alternative medicine, traditional medicine

Introduction

Present day advances in diagnostic techniques have led to a greater incidence of cancer detection. Application of current treatment modalities has resulted in better survival rates and better quality of life, even in patients diagnosed with advanced cancer. At the same time, there are concerns about the adverse effects of chemotherapeutic medicines and radiotherapy. In this particular setting, patients are liable to experiment with CAM. The incidence of cancer is on the rise, and with it, the use of CAM is likely to increase as well.

The WHO defines traditional medicine as “The sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in

the maintenance of health as well as in the prevention, diagnosis, and improvement or treatment of physical and mental illness.”^[1] The WHO also states, “The terms ‘complementary medicine’ or ‘alternative medicine’ are used interchangeably with traditional medicine in some countries. They refer to a broad set of health-care practices that are not part of that country’s own tradition and are not integrated into the dominant health-care system.”^[1]

Surveys conducted worldwide show that the use of complementary and alternative medicine (CAM) is gaining popularity with studies conducted in Europe, America, and Asia suggesting a high prevalence of use.^[2-5] It has been shown from these studies that a vast majority of patients who use alternative forms of medicine do so without obtaining enough information about it.^[2,3] This is particularly disturbing as some studies show evidence of drug interactions between

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Shetty N, Rai PR, Shetty A. Study of the use of traditional, complementary, and alternative medicine in Indian cancer patients. Indian J Med Paediatr Oncol 2019;40:365-8.

**Nishitha Shetty,
Paraashar
Ravindranath Rai,
Arpitha Shetty**

Department of Medical
Oncology, Father Muller
Medical College and Hospital,
Mangalore, Karnataka, India

Submitted: 27-Sep-2017
Accepted in Revised Form:
27-Apr-2018
Published: 04-Dec-2019

Address for correspondence:
Dr. Paraashar Ravindranath
Rai,
Department of Medical
Oncology, Father Muller
Medical College and
Hospital, Father Muller
Road, Kankanady,
Mangaluru - 575 002,
Karnataka, India.
E-mail: paraasharrai7@
gmail.com

Access this article online

Website: www.ijmpo.org

DOI: 10.4103/ijmpo.ijmpo_200_17

Quick Response Code:



conventional chemotherapeutic drugs and CAM. One such study showed that the use of St John's-wort reduced the blood levels of SN-38, the active metabolite of irinotecan, thus reducing its action.^[6] Another major problem faced by health care staff is the unwillingness of most patients to divulge their use of CAM. A study conducted in Australia found a high rate of nondisclosure, with reasons primarily pertaining to the fact that patients were concerned about negative responses from the practitioners. They also felt that the practitioners did not need to know about alternative medicines used or the practitioners did not inquire into CAM use to begin with.^[7] Studies have indicated that a majority of the health-care professionals do not have sufficient knowledge regarding CAM.^[2-4] This may affect the doctor-patient communication, invariably affecting treatment.

Furthermore, traditional medicine varies from country to country and from region to region in its use. Such varied uses can be attributed to culture, tradition, food habits, and attitudes of its practitioners. Being an ancient system of medicine passed on from generation to generation, it has stood the test of time.

The primary goal of the study was to determine the prevalence of the use of traditional and CAM use by the patients visiting a tertiary cancer care center. This study laid an emphasis on the predictors of the use of CAM such as the cause of initiation, the benefits, and side effects associated with it, and the cost of care.

Materials and Methods

This was an observational study conducted at a tertiary cancer care center in South India. The survey was conducted from March 2017 to May 2017. Before conducting the survey, the study protocol was reviewed and approved by the Institutional Ethics Committee. The survey was conducted among patients who were diagnosed with cancer at that point in time or at any time in the past. The patients included in the survey were those attending the medical oncology and radiotherapy departments. Patient selection was discontinuous. The patients who were participating were explained regarding the nature of the survey, were assured anonymity, and were handed over a questionnaire after taking a verbal as well as written consent. Patients or the patient's relatives were encouraged to fill the questionnaire independently wherever possible. Those requiring help were interviewed.

The questionnaire prepared for the survey was adapted from the questionnaire used in the study done in Japan.^[3] The questionnaire was reviewed by two medical oncologists and was given validation after the modifications were made. The questionnaire was prepared in English as well as two other local languages. The questionnaire included sociodemographic data, diagnosis, modalities of treatment received, duration of the use of traditional medicine, reasons

for the use of traditional medicine, side effects noticed, and mean expenditure per month, whether treating physician was consulted before CAM initiation and the subjective benefits experienced by the use of CAM. Patient education levels mentioned in the study were as defined by the International Standard Classification of Education (2011).

Statistical analysis

Data analysis tool of Microsoft Office Excel version 2007 was used.

Results

Four hundred and seven patients were enrolled in the study with a mean age of 53.6 years (18–86). Of the 407, 182 patients were interviewed. The prevalence of traditional medicine and CAM use was found to be 23.5% (96 patients). The mean age of patients on traditional

Table 1: Baseline characteristics of patients using complementary and alternative medicine

Characteristics	No. of patients (%)
Age	
Mean	55.3 years
Range	33-80 years
Sex	
Male	38 (39.6)
Female	58 (60.4)
Education	
Primary	15 (15.60)
Upper primary	30 (31.20)
Secondary	11 (11.540)
Tertiary	4 (4.10)
Bachelors	5 (5.30)
Masters	2 (2.10)
Illiterate	29 (30.20)
Socioeconomic status	
APL	36 (37.5)
BPL	60 (62.5)
Diagnosis	
Breast cancer	25
Pancreaticobiliary cancers	6
Head-and-neck cancers	16
Ovarian cancer	12
Hematological cancers	6
Lung cancers	4
Esophagogastric cancers	12
Cancer of cervix	2
Colorectal cancers	6
Primary peritoneal	1
Prostate cancer	1
Urothelial cancers	3
HCC	1
NHL with prostatic Ca with RCC	1

APL – Above *poverty* line; BPL – Below *poverty* line; HCC – *Hepatocellular carcinoma*; NHL – *Non-Hodgkin's lymphoma*; RCC – *Renal cell carcinoma*

medicine and CAM was 55.3 years (33–80), of which 40% were male and 60% were female. Among the CAM users, the majority (77%) had an education level below the upper primary level and 30.02% were illiterate. The economic status of patients was inferred from their ration cards, issued by the state government. Multiple variables such as Per capita income and access to basic facilities are taken into account to define the poverty line in their particular state. In our study, 62.5% of patients met the criteria for Below Poverty Line set by their respective state governments.

The distribution of the site of the cancers is as depicted in Table 1. The responses to the questionnaire by the patients are as listed in Table 2. Of the enrolled patients, 41.7% were treatment naive, while the rest had received some form of cancer-directed therapy. Most patients utilized traditional medicine and CAM of their own volition or after it was recommended by an acquaintance. The mean duration of use of CAM and traditional medicine prior to hospital admission was 4 months. About 68.75% used traditional medicine and/or CAM along with allopathic medicine.

The mean duration of CAM use overall was 4.8 months (0.25 months–48 months). The majority of them expected a cure (65%) or significant control of the cancer symptoms, and 53% claim to have noticed symptomatic benefit with traditional medicine and CAM, with minimal side effects.

The majority (86.4%) spent <Rs. 5000 per month for traditional medicine and CAM, and its use was disclosed to the treating doctor by 55% of the patients.

Discussion

Over the past two decades, there has been a revival in the popularity of traditional and CAM. In a survey conducted in Delhi, the prevalence of traditional and CAM use was found to be 34%. About 11.5% of the users were found to take at least 6 months after first noticing cancer-related symptoms before consulting the primary care physician.^[8] The prevalence of traditional medicine use in cancer patients in the study was found to be 23.5%. The prevalence of CAM use was significantly higher in patients concurrently

Table 2: Responses received for the questions in the questionnaire

Background Questions	Replies	No. of patients (%)
Treatment received (before the time of interview)	No treatment received previously	17 (17.70)
	Received prior treatment	79 (82.3)
Why did you start CAM?(multiple choices were allowed)	a. Recommended to you by a family member or friend	69 (71.8)
	b. Your own free will	47 (48.9)
	c. Recommended to you by a physician	2 (2.08)
	d. Other	0
Have you tried CAM before coming to the hospital	Yes	40 (41.7)
If yes, then how long	No	56 (58.3)
	Mean number of months	4.1125 months
Simultaneous use of CAM with allopathic medicine		66 (68.75)
Duration of therapy (total including previous CAM treatment)	Mean number of months	4.7968 months
	Range	0.25-48 months
What did (do) you expect out of CAM? (Multiple choices allowed)	a. Cure	63 (65)
	b. Arrest the progress of the disease	47 (48.9)
	c. Improve the symptoms	37 (38.5)
	d. Complementary effects to the present medicine	26 (27.08)
	e. Others	0
Did you perceive any symptomatic benefit?	Yes	51 (53.1)
	No	24 (25.1)
	Difficult to judge	21 (21.8)
Did you perceive any side effects?	Yes	8 (8.33)
	No	87 (90.63)
	Difficult to judge	1 (1.04)
Cost and mean expenditure per month	Nil	4 (4.2)
	1-4999	79 (82.2)
	5000-9999	9 (9.4)
	10000-15000	4 (4.2)
Use of CAM disclosed to the treating physician?	Yes	53 (55.2)
	No	43 (44.8)

CAM – Complementary and alternative medicine

receiving conventional therapy with low education and socioeconomic levels being an important factor. The survey revealed that many of the traditional medicine users had taken the therapy before visiting the hospital, for an average of 4 months. This aspect is important in curable stages of cancer when treatment delays could be detrimental to the prognosis.

Few studies have shown CAM to be beneficial in quelling the cancer-related/treatment-related complications on the body. Ezzo *et al.* evaluated the therapeutic efficacy of acupuncture in controlling chemotherapy related side-effects and found that electro acupuncture reduced vomiting in the acute phase after chemotherapy.^[9] Certain herbal medicines have been found to stimulate immunocompetent cells and reduce the side effects of chemotherapy.^[10] Curcumin, a constituent of turmeric, has shown to have several anti-inflammatory and antioxidant properties and has been the subject of multiple studies which explore its effectiveness in the prevention and treatment of cancer.^[11]

These positive aspects of CAM are overshadowed by disadvantages such as limited scientific research on the efficacy of CAM therapy, lack of a governing body that approves CAM therapy, and a possibility for potentially dangerous cross reactions between conventional modes of therapy and CAM.^[6] Hence, in cancer patients, the use of CAM should not be encouraged unless there is definitive scientific data on benefit. Further, the primary care physician must actively inquire regarding the use of traditional medicine and CAM in patients.

Conclusion

Traditional medicine and CAM use have been shown to have a high prevalence in Indian cancer patients. The usage is more among the less-educated and the economically backward sections of the society. There is not sufficient data to support the effectiveness and safety of traditional medicine and CAM. Hence, primary care physicians as well as oncologists have to acknowledge the increasing use of traditional medicine and CAM amongst cancer patients and actively inquire and educate the patients on its use.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. World Health Organization: WHO Traditional Medicine Strategy 2014-2023. 1st ed. World Health Organization; 2017. Available from: http://www.apps.who.int/iris/bitstream/10665/92455/1/9789241506090_eng.pdf?ua=1. [Last accessed on 2017 Jan 12].
2. Chang KH, Brodie R, Choong MA, Sweeney KJ, Kerin MJ. Complementary and alternative medicine use in oncology: A questionnaire survey of patients and health care professionals. *BMC Cancer* 2011;11:196.
3. Hyodo I, Amano N, Eguchi K, Narabayashi M, Imanishi J, Hirai M, *et al.* Nationwide survey on complementary and alternative medicine in cancer patients in Japan. *J Clin Oncol* 2005;23:2645-54.
4. Richardson MA, Sanders T, Palmer JL, Greisinger A, Singletary SE. Complementary/alternative medicine use in a comprehensive cancer center and the implications for oncology. *J Clin Oncol* 2000;18:2505-14.
5. Boon H, Stewart M, Kennard MA, Gray R, Sawka C, Brown JB, *et al.* Use of complementary/alternative medicine by breast cancer survivors in Ontario: Prevalence and perceptions. *J Clin Oncol* 2000;18:2515-21.
6. Mathijssen RH, Verweij J, de Bruijn P, Loos WJ, Sparreboom A. Effects of st. John's wort on irinotecan metabolism. *J Natl Cancer Inst* 2002;94:1247-9.
7. Robinson A, McGrail MR. Disclosure of CAM use to medical practitioners: A review of qualitative and quantitative studies. *Complement Ther Med* 2004;12:90-8.
8. Broom A, Nayar K, Tovey P, Shirali R, Thakur R, Seth T, *et al.* Indian cancer patients' use of traditional, complementary and alternative medicine (TCAM) and delays in presentation to hospital. *Oman Med J* 2009;24:99-102.
9. Ezzo J, Vickers A, Richardson MA, Allen C, Dibble SL, Issell B, *et al.* Acupuncture-point stimulation for chemotherapy-induced nausea and vomiting. *J Clin Oncol* 2005;23:7188-98.
10. Taixiang W, Munro AJ, Guanjian L. Chinese medical herbs for chemotherapy side effects in colorectal cancer patients. *Cochrane Database Syst Rev* 2005;(1):CD004540.
11. Rahmani AH, Al Zohairy MA, Aly SM, Khan MA. Curcumin: A potential candidate in prevention of cancer via modulation of molecular pathways. *Biomed Res Int* 2014;2014:761608.