Complementary and alternative medicine (CAM) usage in local head & neck cancer patients

Lee P.R.E.¹, Chiang J.¹, Lam C.K.¹, Ng S.T.¹, Poh C.Q.¹, Chan A.², Shih V.³

Department of Pharmacy, Faculty of Science, National University of Singapore
18, Science Drive 4, Singapore 117543.

Abstract
The aim of the present study was to examine the patterns of complementary and alternative medicine (CAM) use in a sample of head and neck patients, forming part of a larger study. A cross-sectional survey design was used through a descriptive questionnaire carried out National Cancer Center Singapore. The participants were 53 patients with head and neck cancers. The prevalence rate of CAM use after diagnosis was 49.1%. The most common therapies were bird’s nest and Traditional Chinese Medicine. Patients with a monthly household income of \( \geq \$2500 \) (\( p = 0.021 \)) were more likely to use CAM. Most patients used CAM to boost their immunity. Information about CAM was obtained mainly from friends and family. More than half of the patients using CAM discussed their usage with their oncologist. As the prevalence of CAM use is quite high in these patients, it is imperative that oncologists increase their knowledge base about the commonly used remedies so that they will be able to educate patients who wish to use CAM in using appropriate and safe therapies. Patient-provider communication should also be improved. Further research should be done to assess the safety and efficacy of CAM and possible drug-CAM interactions.

Introduction
Complementary and alternative medicine, as defined by the National Center for Complementary and Alternative Medicine (NCCAM), is a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine¹. For this report, we wish to focus on the complementary side of the NCCAM definition and mainly investigate the therapies for oral consumption in “Biologically Based Practices” and “Whole Medical Systems”¹.

Based on a meta-analysis of 26 surveys on CAM use in oncology, stemming from thirteen countries, the average prevalence of CAM use in oncology was estimated at 31.4%². Most studies on the prevalence of CAM use in a specific cancer group focuses on breast cancer³, it is important to know that these studies may not be representative of CAM use in other cancer diagnostic groups³. Few studies were found in the literature assessing CAM use specifically in head and neck cancer patients. In one such study investigating prevalence of CAM use in head and neck cancer patients (\( n = 75 \)) in nine countries in Europe, 22.7% of the patients reported use of CAM before or after the diagnosis of cancer and the most common CAM therapies used were herbal medicines (47.1%), medicinal teas (23.5%) and vitamins and minerals (11.8%)³. Counteracting ill effects from cancer or its treatment (41.2%) and to do everything possible to fight the cancer were the 2 most common reasons cited for the use of CAM³. There were no statistical differences between any of the socio-demographic characteristics of the sample and the use of CAM³.

This report forms a subgroup analysis of head and neck cancer patients drawn from a larger survey (\( n = 400 \)) of CAM use in cancer patients in a specific center specializing in the treatment of

¹ Students
² Assistant Professor
³ Senior Pharmacist
cancer. Various characteristics of CAM use are investigated, namely the prevalence of use of CAM, the types of CAM used, CAM acquisition costs and the clinical characteristics and patient demographics that influence CAM usage.

Methods

This is a single-center, cross sectional, prospective study carried out at the Ambulatory Treatment Unit (ATU) of National Cancer Center from October 2007 through February 2008. A standardized questionnaire was used for data collection. It was interviewer-administered in either English or Mandarin. All participating patients received a patient information sheet that explains the details of the study and written informed consent was obtained prior to the start of the survey.

A descriptive questionnaire consisting of 23 items was drafted by 2 oncology pharmacists and vetted by a senior medical oncologist with special interest in CAM. The study was approved by the National Cancer Center Ethics Committee. The 5 interviewers involved in data collection completed the “Good Clinical Practice (GCP)” and “Biomedical Research Investigators and Key Personnel” human research courses by Collaborative Institutional Training Initiative (CITI).

Patients were eligible to participate if they met the following inclusion criteria: they are adults over the age of 21 years old, either male or female with a confirmed diagnosis of cancer regardless of tumor type, conversant in either English or Mandarin; and they are willing to participate in the study and sign the study’s consent form. Patients were excluded if they were unable to give written consent, for example patients with cognitive impairment. Patients were assured of the confidentiality of their responses. A total of 400 patients were approached and gave consent.

Data collected were analyzed using the Statistical Package for Social Sciences (SPSS) program (version 15.0 for Windows). Descriptive statistics were used with all variables to summarize the data. Pearson chi-square tests were used to assess any differences between socio-demographic or clinical data and use of CAM with the level of significance at \( p = 0.05 \) (two-sided test).

Results

The sample consisted of 53 patients with head and neck cancers. There were 34 male patients (64.2%) and 19 female patients (35.8%). Most were married (73.6%) and all but 2 (3.8%) were Chinese. Most received at least a secondary school education (64.1%) but a large proportion of the patients (41.5%) was unemployed or retired. At the time the study took place, all of them were receiving chemotherapy alone or in conjunction with other forms of (conventional) treatment.

27 patients (37.7%) reported use of CAM before the diagnosis of cancer and out of these patients only 9 (45.0%) continued using CAM after being diagnosed. On the other hand, out of the 33 patients who did not use CAM prior to diagnosis, 17 (51.5%) initiated the use of CAM after the diagnosis. Hence the prevalence of CAM use in the head and neck cancer patients after the diagnosis is 49.1% (\( n = 26 \)). The most common forms of CAM used since the diagnosis of cancer were bird’s nest (61.5%), Traditional Chinese Medicine (53.8%), vitamins (30.8%) and organic fruits and vegetables (30.8%). Most patients spent an average of around $100 - $199 per month. \( \chi^2 \) analyses suggested that users differ from non-users with respect to monthly household income; patients with a monthly household income of \( \geq $2500 \) (\( p = 0.021 \)) were more likely to use CAM.

Most of the participants used CAM for the purpose of boosting immunity (61.5%); a smaller proportion of patients used CAM for energy and ‘cooling effect’ (15.4%), for general health (11.5%) or to reduce the side effects caused by conventional therapy (7.7%). Notably, none of the patients used CAM for the purpose to prolong survival or in the hope to cure cancer. Most of the patients (73.1%) perceived CAM to be effective for the purpose they are taking it for.

Friends were the most common source of information about CAM therapies (34.6%), followed by family (26.9%), through other cancer patients (11.5%). Other less frequently reported sources of
information included TCM practitioner (7.7%), magazines/ print media (3.8%), Internet (3.8%), physicians (3.8%), television program (3.8%) or a promotion booth in hospital (3.8%). A large proportion of patients (76.9%) did not verify the information they obtained from the primary source prior to using CAM. More than half of the patients (57.7%) using CAM informed or discussed their usage of CAM with their oncologist. Out of these patients who consulted their oncologist on CAM usage, 53.3% claimed that their oncologists were agreeable to their usage of CAM. On the other hand, 42.3% of the patients on CAM currently did not inform or discuss their usage of CAM with their oncologist. The various reasons for not informing their oncologist include feeling that it is not necessary to tell as they will not be able to advise (18.2%), afraid that their oncologist might discourage use (18.2%), oncologist did not ask (18.2%) and consider CAM as ‘harmless’ (18.2%).

Those participants who reported no use of CAM currently (n = 27) were asked to cite their main reason for not using CAM. The majority (29.6%) was afraid of CAM-drug interactions with the chemotherapeutic drugs they were receiving. One-quarter (25.9%) of the patients were satisfied with the conventional treatment they were receiving and felt that it was not necessary to use CAM.

Discussion

The present study examined the use of CAM among 53 head and neck cancer patients at National Cancer Center Singapore. Of these patients, about half (i.e. 49.1%) of the patients reported using some form of CAM concurrently with their conventional treatment. This finding is higher than the average prevalence of CAM use in oncology of 31.4% based on the meta-analysis of 26 surveys across 13 countries and also higher than the prevalence of CAM use in head and neck cancer patients in Europe of 22.7%. Although the literature suggests that the typical profile of the CAM user is that of a young, female and better-educated person, this was not shown in the present study where monthly household income ≥S$2500 was identified as a predictor for CAM use. This disparity can be accounted for by the fact that much of the international literature has been conducted with breast cancer patients, a typical user profile may not be the case in other cancer diagnostic groups. Moreover, head and neck cancer occurs predominantly in male patients, hence generalizing a profile of users against the profile found in breast cancer studies was not appropriate.

The most common types of CAM therapies used were bird’s nest, Traditional Chinese Medicine (TCM) especially herbs prescribed by the Chinese physician, vitamins and organic fruits and vegetables. Particular therapies may be more popular due to cost or availability. Moreover, in Singapore, traditional health systems like has been integrated as part of mainstream care, thus this could account for the large proportion of the patients turning to TCM. This is consistent with the findings of the survey data on CAM use in the general Singapore population where TCM was the most widely used form of CAM, used by 88% of the 468 respondents. Herbal medicine use amongst patients with head and neck cancer was the most commonly used therapy in the European study. Hence it can be deduced that patients with head and neck cancer were using CAM therapies with a tendency towards the use of herbal medications though the type of the herbs utilized is probably different due to cultural and availability issues.

In this study, most of the participants used CAM for the purpose of boosting immunity; a smaller proportion of patients used it for energy and ‘cooling effect’ or to reduce the side effects. In contrast, the European survey revealed that most of the head and neck cancer patients used CAM for the purpose of counteracting ill effects from cancer or its treatment (41.2%) and to do everything possible to try and overcome the cancer. However, satisfaction with CAM used by patients is rather consistent between the 2 studies with most patients feeling that CAM was moderately effective for the purpose they are taking it for.

Friends and family were the main sources of information in this group of patients, which is consistent with that of the patients with head and neck cancers in Europe. Information regarding
CAM obtained from friends and family is usually informal and uncontrolled, often not based on evidence but rather personal testimonials. This further reiterates the need for more credible and appropriate information to be available to patients, and health professionals can play a major role in this area. A rather significant percentage of the patients did not inform or discuss the oncologist regarding their usage of CAM. This lack of communication of CAM usage with their oncologists is undesirable as oncologists may be able to provide more reliable information for regarding the possible contraindications or benefits. Some patients did not inform as they felt the oncologists would not be able to advise or consider the CAM as ‘harmless’. This suggests an urgent need for oncologists and other health professionals to be more well-equipped with knowledge regarding CAM usage to be in a better position to advise and educate these patients and that patient-provider communication should be improved with the oncologist taking a more proactive role in finding out if patients are on CAM therapies especially since the potential for harmful drug-herb-vitamin interactions exists.

Several limitations of this study include the relatively small sample size used and lack of specific data e.g. with regards to stage of cancer. The study also predominantly consisted of Chinese subjects and thus this may not be representative of head and neck cancer patients in general.

**Conclusion**

The results generated from this study illustrate a rather significant prevalence of use of CAM in patients diagnosed with head and neck cancer in the cancer center. Patients use CAM more as an adjunct therapy with conventional treatment rather than an alternative therapy. Health professionals need to be increasingly aware of such use and should increase their knowledge base about the most commonly used remedies, or at least be able to direct patients to reliable sources of information. These patients may need education about CAM – their possible benefits, contraindications and interactions with conventional treatments and they should be encouraged to discuss CAM use openly with oncologists. Further research should be done to assess the safety and efficacy of CAM and possible drug-CAM interactions in this specific group of patients.

**Acknowledgements**

We would like to thank the patients for their participation in this survey. We are also grateful to Dr Alexandre Chan and Ms. Vivianne Shih for their patient guidance and critical appraisal of the manuscript for us.

**References**