EUROPEAN JOURNAL OF COMPLEMENTARY AND ALTERNATIVE MEDICINE

Journal homepage: www.mcmed.us/journal/ejcam

USING ALTERNATIVE AND COMPLEMENTARY MEDICINE WHILE HOSPITALIZED AND ADVERSE EFFECTS

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Article Info

Received 20/01/2023
Revised 10/02/2023
Accepted 21/02/2023

Key words:
CAM, side effect, dietary supplement

ABSTRACT

CAM use in hospitalized patients was explored, as well as its prevalence, disclosure, and adverse effects as well as its relationships to patients' perceived side effects. A semi-structured questionnaire was administered to Hospitalized patients in district general hospitals who met the eligibility criteria. Medical notes were reviewed to verify their medications and pertinent information. Data were collected and analysed in both quantitative and qualitative forms. An analysis of chi-squared testing was conducted to determine if perceived CAM side effects are associated with significant levels of CAM side effects. Study participants included 120 in-patients. A prevalence of 74.6% in two years and a prevalence of 37.9% in one month was found. There were 45.8% of patients using 2 years of CAM who had negative effects that subsided after dis-continuation. There was a significant association between gender (P=0.048) and Future considerations for the use of CAM (P=0.033) for over half of the respondents who perceived indirect effects of CAM. A total of 41 patients (45.8%) had dietary supplements or potential herbal remedies interactions with prescription drugs, such as garlic with aspirin or lisinopril. The majority of in-patients used complementary and alternative medicine. Some negative effects were experienced. It is mandatory for healthcare professionals to tell patients to disclose their CAM use and adverse outcomes.

INTRODUCTION

There are many medical conditions that can be prevented and treated with alternative and complementary therapies (CAM). According to the World Health Organization, complementary and alternative medicine (CAM) includes a wide range of practices that are not part of the dominant health care system in the country and do not fit into traditional medicine [1]. Generally, complementary and alternative medicine [2, 3] practices can be classified into four categories: mind-body medicine, natural products, body-based methods and manipulative techniques, and other practices, such as qigong, movement therapies, etc. There is evidence that between 69 and 71% of people in the United Kingdom use complementary and alternative medicine at some point during their lives, according to a number of studies [4, 5]. Often, healthcare professionals are unaware of complementary and alternative medicine [6-8].

In a study [7], nearly fifty percent of the users of natural products (44.7% of respondents) did not report their usage to their physicians, and 29.7% of respondents did not believe it was necessary to report the usage. Thus, in order to ensure the safety of patients, the disclosure and nondisclosure of CAM use must be fully investigated.

Many patients using complementary and alternative medicine are concerned about potential adverse effects. [9, 10] Effects such as these could affect patients' pathology, delay the diagnosis or complicate medical conditions. Furthermore, patients who receive multiple drugs as well as those who use complementary and alternative medicine tend to experience apprehensions. Conventional medicines are pharmacologically active, but dietary supplements and herbal remedies has few risks of negative effects and

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drug therapy interaction [11-13]. As a result, conventional medications could not be absorbed or bioavailable by the body, resulting in toxicity or an extended hospital stay. Although CAM is associated with adverse effects, further research is needed to understand these effects

Researchers from both the National Research Ethics Service Committee (NRES) and the University's ethics committee have conducted CAM studies [5,7,14,15] in patients enrolled in GP practices or hospital outpatient departments [7, 8]. Healthcare Trust was allowed to audit the quality improvement of its audit procedures as well as be subject for privacy protection, quality Improvement units and Research and Development.

Patients who take complementary and alternative medicine (CAM) commonly buy treatments and medicines from health shops, which are not typically prescribed by doctors or pharmacists. We have divided complementary and alternative medicine into two categories for the purpose of data analysis and interpretation: dietary supplements and herbal remedies (HS, e.g. vitamins and minerals supplements, natural products) and other sort of CAM (non-HS, such as acupuncture, massage, aromatherapy and homeopathy). Patients reported (1) suspected adverse CAM reactions (called 'actual CAM side effects') according to their records,

There is also concern about how CAM practices are perceived to have side effects and the third issue is how dietary supplements and herbal remedies interact with prescribed medications. Lack of adequate clinical data prevented us from assessing the interactions of other forms of CAM (non-HS) in hospitalized patients.

An assessment of causality was done by using documented evidence and temporal sequence such as complaints or research papers regarding patients' reports of actual side effects of CAM.

Drug-CAM interactions that may cause adverse effects are defined in this study as drug-CAM interactions capable of being explained by pharmacokinetics or pharmacodynamics and likely to cause patients' HS adverse effects. Stockley's Herbal Medicine Interaction [13] and hospitalized patients were mostly used by the researchers to assess the adverse interactions. These few questionnaire surveys focused primarily on how and why people used complementary and alternative medicine. It was the purpose of this study to examine the prevalence, disclosure, and adverse effects of CAM used by in-patients in order to determine any associations between patients' perceptions of CAM side effects and relevant factors.

Pharmacists and healthcare professionals may gain insight into patients' use of complementary and alternative medicine, disclosure of adverse effects, and monitoring of medication use through this report.

Patients and eligibility criteria:

Adult inpatients admitted to five specialty wards were included in the study: General Surgery, Orthopedics & Trauma, General medicine Elderly Medicine and Gynecology. By selecting these wards, we sought to enroll a broad range of patients, rather than concentrating on specific patient groups in other studies. Getting data from Children's and Oncology wards was not feasible. Patients aged 16 and older who provided written or oral consent were included in the study. An individual was excluded if they had a terminal illness, mental health diagnosis, a cancer diagnosis was not able to communicate with the in English. According to the ethics committee, staff on the wards could also exclude patients from the study if they deemed it to be unsafe and inappropriate. The consent form was also accompanied by a participant information sheet explaining the purpose of the study, the definition and examples of complementary and alternative medicine (CAM), study activity, risks and benefits of participation, including confidentiality and withdrawal rights.

In order to estimate the sample size, the prevalence of CAM use among in-patients was used in conjunction with English, which is 4(Zcrit)2p(1-p)/d2. The prevalence rates of CAM use varied substantially among the studies owing to the different study designs and periods of CAM use, i.e. within 1-2 years or over time. A prevalence of 68.0% was chosen due to its reliability when it came to hospitalised patients who had ever used CAM. Accordingly, the sample size was calculated as 42 - 167 with a confidence interval of 90% and a width of 5% - 10%. The study could not detect a prevalence rate based on the incomplete data and patients' responses.

Study instrument:

According to the literature evidence, we developed a close end and open-end questions. Patients were better communicated with by using the simple term 'alternative medicine' in the questionnaire. Three sections were included in this questionnaire. There were two sections, one covering characteristics of the patient and one covering the CAM uses and its ill effects. From the medical records of patients, Section 3 contains data on medical conditions, records of complementary, conventional drug use and alternative medicine use, adverse effects, length of hospital stay, and discharge outcome data. An expert panel of complementary therapies, clinical pharmacists, and statisticians reviewed the questionnaire for content validity.

Data collection:

A unique identifier was assigned to each inpatient meeting the eligibility criteria, such as R1, R59, or R240. The researcher informed the participants of the investigation and the consent form before interviewing them face-to-face for approximately 25-60 minutes using the questionnaire. Following this, Section 3 of the questionnaire requested verification of the patient's medical notes. Patients reporting adverse effects from CAMs would be discussed with relevant ward pharmacists and the problem would be resolved.

Data analysis:

PASW Statistics 18 (SPSS-IBM Corporation, Chicago, Illinois) was used to analyse all quantitative data obtained from completed questionnaires. We utilized descriptive statistics and a Chi-squared test or Fisher's exact test. We set an alpha level of 0.05 for significance. To provide further insight, some obscure data was highlighted from the answers provided by patients. A content analysis based on coding schemes has been conducted by the researcher using data and previous studies. Some of the reasons for disclosing the use of CAM include:

HCPs for whom CAM use is asked (if asked by providers) WTAs for whom CAM use is accepted (if willing to admit it) ATTs for whom CAM use is accepted. An APR is a health care provider's approval to use complementary and alternative medicine (CAM).

RESULTS

This study recruited 150 inpatients at the beginning. There were 22 participants who refused to participate, 5 who refused permission to review their medical records, and three who withdrew from the study during the interview process. This allowed us to interview 120 patients and review their medical records. In Table 1, you can find information about the patients' characteristics. Approximately 55.4% of respondents were females compared to 44.6% of respondents who were males. With a mean age of 58.2 years, the majority of patients were over the age of 60 (more than 50). Additionally, the majority of patients were admitted to the following three major surgical specialty wards: General Surgery, Orthopaedics and Trauma, and General Medicine for a median stay of eight days (interquartile range: four - fourteen days).

Use of CAM.

Based on Table 1, 90 patients used CAM within two years of the interview, but 45 continued to use it one month prior to the interview. Accordingly, 74.6% and 37.9% of the general population used CAM within two years and one month, respectively. Based on Table 2, we have summarized the specific types of CAM that patients used. Massages, aromatherapy, acupuncture, reflexology and homeopathy were reported as top 5 non-HS, whereas nutritional oils, vitamins, minerals and glucosamine were top 5 HS. The majority of patients indicated that they would use complementary and alternative medicine in the future.

In spite of its effectiveness and fewer side-effects, its availability and accessibility, as well as professional recommendations and suggested conditions, 71.5 percent would consider using CAM in the future after discharge. Below are some reasons given by patients, along with the codes for their identification:

This natural remedy is effective, natural, harmless and has fewer side effects than prescription medicine (R-9).

(R-15) "I expect to use it if it is recommended by doctors or nurses."

As a result of some side effects experienced with conventional medicine, she prefers alternative medicine." (R-88)

Disclosure of CAM use. Table 1 provides data on the use of CAM by 90 patients within two years. In contrast, 46 patients (18.3%) reported that they had continued to use CAM within a month. The medical notes were also used to verify their disclosure. Here is a list of reasons why information was disclosed or not disclosed

Whether they answered questions willingly, had favorable attitudes toward healthcare professionals, or were asked that way, patients disclosed their usage of CAM. They were not notified because they didn't perceive the benefits of CAM medicines, weren't using them at the time of inquiry, didn't specifically ask about CAM, or misinterpreted the questions about CAM.

CAM side-effects. There were slight majority of respondents who believed that it might have some side-effects (90.6%) in Table 1, but the rest had no opinion or were undecided. Discontent with unqualified CAM practitioners and unrestricted regulations resulting from patients' experiences of counter-alternative medicine side-effects. A number of adverse effects associated with CAM were reported, including:

Alternative medicine is not well understood. A few unwanted effects may occur." (R-18)

Medical personnel are not involved in the distribution of CAM information, as is the case with medications (R-35).

The answer to this question varies according to sensitiveness of individuality, personal experiences, and types of people. (R-107)

It was discovered in the hospital that there was a clot in the lungs after a massage. (R-154). An increase

in blood sugar readings was reported by homeopathy. (R-156)

Potential interactions with prescribed drugs

A total of 41 patients (90.6%) could be identified as having possible HS interactions with prescription drugs. In Table 5, we provide an in-depth analysis of how HS interacts with prescription medications. Many of these interactions involved non-steroidal anti-inflammatory drugs, anti-coagulants, anti-platelet agents, and anti-hypertensives (including ACE inhibitors). Theophylline and digoxin also showed significant interactions.

Table No. 1. Patient characteristics and CAM usage (N=120)

Variables	Characteristics	No of patients (%)
Age (groups)	16to39	16 (6.6)
	40 – 59	40 (16.6)
	> 60	64 (26.6)
Gender	Male	50(44.6)
	Female	70(55.4)
Education	Nil/primary	34 (14.1)
	College level	68 (28.3)
	Pg degree	18 (7.5)
Wards (department of specialities)	G.s – general surgery	36(15)
	G.m- general medicine	35(14.6)
	O.p (orthopaedics) &trauma	40(16.6)
	Gynecology	4(1.6)
	Elder medicines	5(2.1)
Hospitalization duration	Median level	4 (2 – 7)
Usage level (complementary – alternative medicine)		
With-in 2 yrs	Yes	90 (37.9)
With-in 30 days	Yes	46 (18.3)
Future considerations	Yes	86 (71.5)
Disclosure of cam use		
Persons used with-in 2 yrs (n=90)	Yes	13 (7.0)
Persons used with-in 30 days (n=46)	Yes	9 (10.5)
A perception of the side effects of cam (n=59)	Yes	68 (53.8
Cam's actual side effects (n=45)	Yes	41 (90.6)
Interactions with hs (n=45)	Yes	41 (90.6)

Table No: 2. Complementary and alternative medicine treatment types used by inpatients

ALTERNATIVE AND COMPLEMENTARY MEDICINE	No of Patients	
	Persons Used With-In 30 Days (N=46)	Persons Used With-In 2 Yrs (N=90)
Supplements/herbal remedies (HS)		
Herbal Tea	5	8
Aloe vera	1	7
Garlic	3	15
Supplements of vits and minerals	8	15
Brewer's yeast	5	8
Chinese herbs	-	3
Rhubarb pills	-	2
Cohosh (black)	1	8
Ginseng	5	8
Clove oil	3	2

Cannabis	1	2
Acupuncture	4	5
Technique of Alexander	7	4
Nutritional oil	3	3
[a] One or more types of CAM used by in-patients.		

Table No. 4. Body-system-specific side-effects reported by patients of CAM's

Number of complaints (side-effects)	An attribute-based CAM
GIT (21)	
A constipated feeling	Arthritis powder, evening primrose oil, cod liver oil
An unkempt stool	An iron-rich multivitamin
A diarrheal illness	Supplements (iron), herbal laxatives, herbal teas
Not diarrhea, but increased defecation	Protein and creatine shake
Intestinal discomfort, flatulence, bloating	Seaweed (kelp), dandelion, and valerian products
CNS (17)	
There is a bitter taste to it	Herbs of Chinese origin
A funny sensation in my mouth	Bulb of garlic
Convulsions	acupuncture
Anxiety, fainting	The Alexander technique is used to mix liquid from herbalists
Dreams	A black cohosh herb
Feeling dizzy or lightheaded	Dizziness or lightheadednessChiropractic, evening primrose, valerian product, angus containing vitamin B, adios slimming pill
Respiratory system (3)	
Feeling unwell, flu-like	Reflexology, cod liver oil, and St. John's wort
Breathing problems	Physiotherapy
Asthma	Supplements containing glucosamine

Table No: 5 The association between perceived complementary and alternative medicine (CAM) side effects and a variety of patient factors (N=120).

Factor	Attribute	Perceived CAM side-effects (%)			Cramer's V	*P* value
		Yes (n=68)	No (n=26)	Uncertain (n=26)		
Gender	Female	36 (26.3)	18 (34.0)	11 (22.5)	0.080	0.024
Age group	> 60	37 (27.9)	12 (23.5)	13 (26.0)	0.034	0.344
Education	College	38 (28.3)	14 (28.4)	14 (28.1)	0.020	0.469
Specialty ward	Orthopaedics & trauma	23 (16.9)	8 (15.7)	9 (17.3)	-	0.5
Use CAM within 2 years	Yes	51 (37.8)	20 (39.2)	17 (35.7)	0.027	0.356
Use CAM within 1 month	Yes	25 (18.4)	11 (21.5)	10 (19.4)	0.027	0.363
Consideration for future use	Yes	48 (35.6)	21 (42.1)	15 (29.6)	0.074	0.016
Disclosure of CAM use	Yes	9 (6.5)	3 (7.3)	1 (2.2)	0.056	0.124

DISCUSSION

It has been difficult to gain knowledge of the manner in which CAM is used by in-patients in globally. Based on data collected from the study, With-in two years 90 (37.9%), this study found that CAM was widely used compared to other studies of hospitalized patients and ambulatory patients. The differences were possibly due to the differences in the characteristics of the studied population, variations in the types of complementary therapies available, and the length of time the participants used CAM. It was the first study to report the prevalence of CAM applications with-in 30 days of

admission, or during admission. Medical notes rarely record a patient's history of using complementary and alternative medicine during or prior to admission, Another CAM study found a 20% or lower disclosure rate among patients [6, 8]. Most healthcare providers ask - "Are you taking any other medicines?" - before asking specifically about CAM use. A study indicated that doctors may not consider complementary and alternative medicine to be prescription or over-the-counter medicines, thus limiting the disclosure of CAM usage. In addition, healthcare professionals' attitudes toward complementary and alternative medicine also influenced their willingness to disclose their practices. Under-reporting of adverse effects associated with CAM might also be due to this reason. There were slight differences between genders and views regarding future use of CAM among the patients. Female patients perceived adverse effects of CAMs more easily, despite being less harmful than male patients, and used CAMs more frequently. A study confirmed that female patients frequently use complementary and alternative medicine as well as health services in general. As well as that, patients who expressed an interest in using CAM in the future tended to say they had fewer side effects associated with it than with conventional drugs. According to this study, there was no association between the use of CAM currently or in the past and perceived side effects, perhaps since most patients did not fully understand whether it could actually cause problems. An additional explanation for under-reporting could be that some drugs or CAMs have adverse effects.

As a result, Alexander technique, patients suffering from pulmonary embolism experienced hemoptysis and syncope, all of which were mild to moderate. According to this study, patients' use of CAM resulted in permanent adverse effects, versus previous studies [6] that documented only theoretically possible adverse effects. According to the Rawlins-Thompson classification the adverse CAM reactions (or actual CAM side effects) experienced by patients are difficult to classify as Type A or B. The simple causality assessment, however, deemed the CAM practices or medicines as 'possible' causes of adverse effects with limited information. Conventional drugs and High School are unlikely to interact [15], and there has been no report of potential interactions in patients hospitalized. While theoretical potential interactions have been examined in this study, researchers' backgrounds or lack of evidence might have caused exaggeration or underestimation of the interactions. [13] The management of patients who take CAM together with conventional drugs should be prudent regardless of whether drug-CAM interactions are clinically significant. There was no specific description of grape fruit juice by patients in this study, as it may be used alone or in herbal tea occasionally. The enzyme inhibitory effects of it make its interactions with conventional drugs of paramount significance.

CONCLUSIONS

Hospitalized patients may be investigated for their CAM use, disclosure, and adverse effects, as well as the associations between perceived side-effects and gender. It is also necessary to record the discovered data in medical notes or through the Yellow Card Scheme, which is a tool for reporting suspected adverse drug reactions (ADRs) to medicines. In addition, CAM should be regularly assessed for potential interactions with conventional pharmaceuticals or underlying diseases. To ensure patient safety and effective medicines management, pharmacists can monitor patients' CAM use as part of a hospital pharmacovigilance system. A health policy maker must consider regulatory standards to ensure the availability, accessibility and safety of complementary and alternative medicine to the public and patients. The effectiveness and safety of CAMs need to be evaluated in specific patient groups to determine their specific usage and adverse events.

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