



Complementary and alternative medicine use among Hypertensive patients in a tertiary care hospital

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Abstract

Background: Complementary and alternative medicine (CAM) use is prevalent among chronic diseases like Hypertension (HTN). Therefore, the aim was to study the pattern of CAM use among hypertensive patients in our set up.

Methods: The study was done in hypertensive patients attending OPD of Government medical college, Jammu hospital over a period of 6 months. Patients who gave consent were subjected to a pre-structured questionnaire which consisted of two parts pertaining to socio-demographic profile and CAM usage details.

Results: A total of 100 patients of hypertension consented to participate in the study of which 46 were CAM users and 54 were non-CAM users. Out of total 100 patients (69.5%) were females. Most of the CAM users were married (56.5%), having low socioeconomic status (67.3%), sedentary lifestyle (60.8%) and between age group of 40-49 years (34.7%). Ayurveda (28.2%) was the most common CAM modality used followed by Herbal medicine (26%). Relatives (39.1%) were the main source for providing information regarding CAM. The

most common reason (28.2%) stated for not revealing CAM use was the fear of disapproval by the physician. The results suggest that patients should be encouraged to reveal to their physician regarding CAM as it can avoid possibility of interactions.

Conclusions: CAM is prevalent in hypertensive patients and more so in females having low socioeconomic status. Ayurveda was the most widely type of CAM used and majority of patients did not disclose to the treating physician regarding CAM usage.

Keywords: Anti-Hypertensive drugs, Complementary and alternative medicine, CAM, Hypertension, Tertiary care.

Introduction

Complementary and alternative medicine is defined as practices, approaches, knowledge and beliefs that incorporate plant, animal and mineral-based medicines, spiritual therapies, manual technique and exercise.¹Complementary and alternative medicine (CAM) use is prevalent globally among patients and is much higher in the developing countries. Complimentary medicines refer to the use of non- conventional therapy,

in conjunction with regular treatment, while alternative medicine refers to the use of non- conventional treatment. CAM comprises over 100 forms of treatment .² The usage of CAM could have potential implications for patients and doctors. Poor communication between patients and doctors regarding CAM use has been reported overseas and locally. Patients were unaware of potential health risks of CAM, including drug interactions, side effects and non- compliance to conventional medicine.³ African countries are currently undergoing one of the most rapid epidemiological transitions. These countries have been characterized for a long time by incidence of infectious diseases, demographic and nutritional transitions contributing to a growing prevalence of non-communicable diseases such as hypertension. Hypertension is the leading cause of cardiovascular disease and premature death worldwide. Owing to the widespread use of antihypertensive medications, global mean blood pressure (BP) has remained constant or has decreased slightly over the past four decades. It is well known that up to a third of cardiovascular deaths can be avoided by proper treatment and control of hypertension.⁵ By contrast, the prevalence of hypertension has increased, especially in low- and middle-income countries (lmics). Estimates suggest that 31.1% of adults (1.39 billion) worldwide had hypertension in 2010. The prevalence of hypertension among adults was higher in lmics (31.5%, 1.04 billion people) than in high-income countries (28.5%, 349 million people).⁶ India too has many religious and spiritual beliefs and these are more likely to influence the usage of CAM. Being one of the birth places of oldest systems of medicine, Ayurveda, which had its origin around 2000 years back and is the most commonly practiced form of

CAM. Besides, Ayurveda, Yoga, Naturopathy, Unani, Sidda and Homeopathy are other forms of CAM practiced in India. About 80% Indian patients use ayurvedic drugs particularly in chronic illnesses.²

Various reasons for usage of alternative medicine include resentment of modern medicine, easy accessibility, cheap and social influence.⁷ Globally, medicinal plants have been used as a source of medicine and 80%-85% of populations rely on these plants for their extracts and their active compounds have been used in making of traditional medicine for meeting the requirement of primary health care.⁸

The efficacy of CAM in these diseases is still not validated and some type of CAM may be ineffective and pharmacologically incompatible with patient's antihypertensive medications or may even can cause interactions.⁹ This situation is further compounded by the fact that many of these patients do not disclose their CAM use to their physicians putting them at risk of adrs and interactions. Therefore, it is of utmost importance that there should be clarity among the physicians so that they can make safe choices and avoid interactions with CAM.

Thus, the present trial was undertaken to evaluate the usage of CAM in patients of hypertension and factors influencing CAM usage.

Methods

The current study was conducted among patients of hypertension attending the OPD of Govt Medical College, Hospital Jammu from December 2019 to May 2020. The study was reviewed and approved by the Institutional ethics committee vide order number IEC/GMC/2019/770. Prior to commencement of the study an informed consent was taken from the participants and they were briefed regarding the purpose

of study and were also assured that the information collected would be strictly confidential.

A total of 100 patients of hypertension over a period of 06 months on conventional treatment were screened and 46 patients were found to be using CAM. These 46 patients were evaluated for CAM parameters and were subjected to a self-structured questionnaire. Results obtained were tabulated in percentage. A patient was termed a CAM user if he/she had ever tried CAM for HTN till the time of the study. A CAM non-user was defined as one who had never used any CAM therapy.

The questionnaire consisted of 2 parts: The first part pertained to a collection of socio-demographic information of the patient (age, gender, residence, occupation, marital status, education, socio economic status, duration of disease, use of anti-diabetic drugs) and number of CAM user and non-users. The second part addressed questions related to CAM its type and pattern, which included knowledge of CAM, initiation of CAM use, type of CAM satisfaction/dissatisfaction related to its use, reason for use, duration of disease in relation to CAM, side effects. Patients were also asked about the source of their CAM awareness, who advised use of CAM and whether they informed their doctor regarding CAM usage.

Inclusion criteria

1. Patients who were above 18- 67 years of age having HTN with minimum duration of one year and gave informed consent.
2. Patients using CAM along with conventional antihypertensive medications.

Exclusion criteria

1. Patients who could not complete the questionnaire process.
2. Patients who did not give informed consent.

Statistical analysis

Analysis was carried out and the data was expressed in n (%). Chi-sq test was applied for some of the parameters to prove their statistical significance. P-value <0.5 was considered as significant.

Results

A total of 100 patients of hypertension consented to participate in the study of which 46 were CAM users and 54 were non-CAM users. Out of total 100 patients (69.5%) were females and (30.4%) were males. Most of the CAM users were married (56.5%), having low socioeconomic status (67.3%), sedentary lifestyle (60.8%) and between age group of 40-49 years (34.7%).

The patterns of CAM use among patients of hypertension revealed that majority of the patients (67.3%) were aware about the CAM. Females were predominant CAM users. Patients with more than >5 years of duration of disease were prone to use CAM. Most of the patients (60.8%) started using CAM after their antihypertensive treatment. Ayurveda (28.2%) was the most common CAM modality used followed by Herbal medicine (26%). Relatives (39.1%) were the main source for providing information regarding CAM. The most common reason (28.2%) stated for not revealing CAM use was the fear of disapproval by the physician. The most common reason for using CAM as reported by (34.7%) users was its safety, effectiveness and low cost of CAM were the other reasons stated for using CAM.

Table 1: Socio-demographic profile of patients of Hypertension n=100

Parameters		Non – CAM users	CAM- Users	P- value, Non-CAM Users versus CAM users	
Use of CAM		54	46		
Age in years	18-28	3(5.5%)	1(2.1%)		
	29-39	7(12.9%)	3(6.5%)		
	40-49	11(20.3%)	14(30.4%)		
	50-59	13(24%)	16(34.7%)		
	60-69	17(31.4%)	11(23.9%)		
	>70	3(5.5%)	1(2.1%)		
Sex	Females	23(42.5%)	32(69.5%)	P=0.007 X ² =7.24 DF=1	
	Males	31(57.4%)	14(30.4%)		P=0.007 X ² =7.24 DF=1
Religion	Hindus	36(66.6%)	26(56.5%)	P=0.3 X ² =1.06 DF=1	
	Muslims	10(18.5%)	16(34.7%)		P=0.06 X ² =3.35
	Others	8(14.8%)	4(8.6%)		P=0.34 X ² 0.89
Education	>high school	22(40.7%)	10(21.7%)	P=0.04 X ² =4.08	
	<high school	15(32.6%)	12(26%)		P=0.4
	Illiterate	17(31.4%)	24(52.1%)		X ² =0.51 P=0.03 X ² =4.3
Occupation	Females			P=0.002 X ² =14.03	
	Non-working	9(16.6%)	24(52.1%)		
	Working			P=0.3 X ² =1.06	
	Male	14(25.9%)	8(17.3%)		
	Non-working	19(35.1%)		P=0.04 X ² =3.9	
	Working	12(22.2%)	8(17.3%)		
			6(13%)	P=0.2 X ² =1.4	

Marital Status	Married	20(37%)	26(56.5%)	P=0.05 X ² =3.7
	Unmarried	30(55.5%)	14(30.4%)	P = 0.01 X ² =6.2
	Others	4(7.4%)	6(13%)	P = 0.3 X ² =0.8
Socioeconomic status	<10,000	22(40.7%)	31(67.3%)	P=0.008 X ² = 6.9
	≥10,000	32 (59.2%)	15(32.6%)	P=0.008 X ² =6.9
Life style	Active life	38(70.3%)	18(39.1%)	P=0.001 X ² = 9.7
	Sedentary life	16(29.6%)	28(60.8%)	P= 0.001 X ² = 9.7
Daily routine effected by disease	No	29(53.7%)	28(60.8%)	P=0.4 X ² = 0.5
	Yes	25(46.2%)	18(39.1%)	P =0.4 X ² = 0.5
Chronic Smoker	Yes	39(72.2%)	15(32.6%)	
	No	15(27.7%)	31(67.3%)	
Chronic Alcohol	Yes	31(57.4%)	24(52.1%)	
	No	23(42.5%)	22(47.8%)	

Table 2: Clinical Characteristics of Hypertensive Patients n=100

Parameters		CAM – Users	CAM Non- Users	
Duration of disease in relation to CAM use	< 5year	18(39.1%)		P =0.03*
	>5 year	28(60.8%)		X ² = 4.2
Co-morbidity	Yes	32(59.2%)	19(41.3%)	P=0.08* X ² =2.9
	No	22(40.7%)	27(58.6%)	P=0.08* X ² =2.9
Conventional medication for hypertension	Oral antihypertensive	31(67.3%)	21(38.8%)	P=0.006* X ² =7.4
Side effects related to antihypertensive		29(63%)	17(31.4%)	P=0.002* X ² =9.1

Table 2; 60.8% of patients started using CAM after being hypertensive for more than 5 years of duration which was statistically significant. Approximately 59.2% CAM users had associated co-morbidity in comparison to non-CAM users (41.3%). 67.3% CAM users took oral hypertensives while 63% suffered side effects related to these hypertensives.

*= statistically significant (p <0.5)

Table 3: Pattern of CAM use in hypertensive patients n (%) =46

Parameters	CAM USERS n (%)	P-value
Knowledge or awareness about CAM	Present	31(67.3%)
	Absent	15(32.6%)
Gender of CAM user	Females	32(69.5%)
	Males	14(30.4%)
Initiation of CAM use	After using Anti-hypertensive treatment	28(60.8%)
	Before using Anti-hypertensive treatment	18(39.1%)
Type of CAM use	Ayurveda Meditation	13(28.2%)
	Herbal medicines Garlic	8(17.3%)
	Yoga	12(26%)
		8(17.3%)
		5(10.8%)
Source of information regarding CAM use	Relatives	18(39.1%)
	Friends Neighbors	14(30.4%)
	Media	5(10.8%)
		9(19.5%)
CAM provider	Self	18(39.1%)
	Quacks	12(26.0%)
	Homeopath	9(19.5%)
	Yoga instructor	7(15.2%)
CAM revealers	To ensure proper relief	28(60.8%)
	Physician enquired	18(39.1%)
CAM non - revealers	Fear of disapproval by the physician	13(28.2%)
	They feel CAM is safe,	16(34.7%)
	No need to discuss its use	10(21.7%)
	Didn't find necessary to tell physician	3(6.5%)
	Not enquired by physician	4(8.6%)

Table 3; Majority of the patients 67.3% had knowledge about CAM while 69.5% were females. patients who used CAM after using antihypertensive medications were 60.9% .28.2% used Ayurveda, 17.3% did meditation, 26%used herbal medicines, 17.3% used garlic while 10.8% performed yoga. Relatives were the major source of information regarding CAM use 39.1% while friends were 30.4%. 39.1% bought CAM themselves while 60.8% revealed themselves about usage of CAM. Feeling of CAM being safe (34.7%) was the highest reason for non-revealing.

Table 4: Reasons for starting CAM n (%) =46

CAM is safe	13(28.2%)
Effective	9(19.5%)
Less Costly	7(15.2%)
To improve body health	4(8.6%)
Dissatisfaction from conventional medicines	2(4.3%)
>2 reasons for using CAM	11(23.9%)

Table 4 ;28.2% stated CAM being safe (table 4) while 23.9% had more than 2 reasons for using CAM. 19.5% of patients considered it to be effective whereas 15.2% thought it to be less costly.

Discussion

CAM is one of the frequently used therapies in western countries particularly for chronic diseases which require conventional medicine.³Patients suffering from chronic diseases choose to use CAM due to dissatisfaction with modern medicine.⁸Hypertension is one of the most common diseases in India, according to recent reports its prevalence was 43% and prevalence was higher among patients with co morbidities (diabetes64.5%, transient ischemic attack 54.7% and heart disease 64.4%) and is a major health problem and requires prolonged and regular medications. Hypertension is an important risk factor for chronic disease burden in India and a preventable contributor to death, disease, and disability. Nearly 10.8% of all deaths in India are attributed to hypertension .¹⁰ The incidence of hypertension in India is 29.8% so this alarming situation mostly motivates the patients to seek for alternative therapies in conjunction to conventional medicines which get swayed by social and cultural beliefs.

In recent years the use of CAM as a form of self-care has been growing area of health care especially in developed countries. The reason why CAM is being attractive among people is because it is consonant with their personal values, religious and health philosophies.¹¹

CAM use in hypertension has been reported and there seems to be a high prevalence of CAM use in patients of

hypertension. To date there is a little published literature on the use of CAM in the patients of hypertension in India. CAM use among hypertensive patients is necessary for the safety as well as in elucidating information regarding the ways in which patients cope up with blood pressure control. The current study was thus taken up due to scarcity of literature available in our country and especially in our region. Out of 100 patients 46% were CAM users which is consistent with the observation reported in number of western studies reported .¹²however our results were inconsistent with the results of the other researchers where CAM was higher. The frequency of CAM users before antihypertensive treatment was 39.1% and after conventional treatment was 60.8% in our study which is similar to observation made by other studies. In our set up we found that females used CAM more than males. The reason being that females are easily influenced by socio-cultural beliefs, friends and relatives etc. The results being concurrent to the observations made by other authors.² Nearly 69.56% patients were from rural background who sought CAM because of easy accessibility to it, cultural and holistic beliefs and most of all influenced from their relatives 39.1% were the main source of information regarding the use of CAM followed by friends 30.4%, media 19.5% and neighbours 10.8% which is similar to other studies.⁴The type of CAM used Ayurveda 28.2%

was the most common modality used by patients followed by herbal medicine 26%, meditation 17.3% and yoga 17.3%.

Our observations are consistent with the results obtained from studies done by other author's.¹³The most important reason for using CAM was the expectation that CAM will reduce their symptoms, avoid complications being safe (34.7%), most of the participants (28.2%) did not disclose the use of CAM due to fear of disapproval of CAM use by the doctors which was their main concern, while 21.7% thought CAM was safe so no need to disclose to the doctor.

However contrarily to the beliefs as depicted in the current study, the CAM is not absolutely safe as there is always a potential risk of drug interactions with the conventional antihypertensive medications.

Conclusions

Therefore, we conclude from our study that CAM is prevalent in hypertensive patients and majority of patients did not disclose to the treating physician regarding CAM usage. Patients should be encouraged to reveal to their physician regarding CAM as it can avoid possibility of interactions.

Ethical approval: The study was approved by the Institutional Ethics Committee

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