

The Use Of Herbal Medicines By People With Hypertension In Palestine

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ABSTRACT: Due to the increasing prevalence of hypertension, the use of herbal as a complementary and alternative medicine (CAM) has become more common. This is because hypertension patients are interested in improving the quality of life by using herbs as CAM with conventional hypertension treatment. The purpose of this study is to investigate the use of complementary and alternative medicine (CAM) in the treatment of hypertension in humans in Palestine. A cross-sectional survey of hypertension patients was undertaken using semi-structured questionnaire. Results: A total of 83 patients with hypertension were interviewed. Of the participants, 59% (n=49) reported using herbs primarily bought from Palestine (60.2%).The most common herbal product was *Allium sativum*. Most Complementary and Alternative (CAM) users were more than 60 years of age, predominantly female, and living in rural areas of Palestine. Family member's recommendation was cited as the main factor prompting participants to use CAM (32.5%).Conclusion: This study revealed that there is an appreciable prevalence of herbal use among patients with hypertension in Palestine.

Keywords : Herbal Medicines, Hypertension, Herbal, Palestine

1 INTERDCTION

Hypertension is a metabolic disorder and one of the most common chronic diseases affecting millions of people globally. It continues to increase both in numbers and in the impact upon quality of life, as changing lifestyles lead to reduced physical activity and increased obesity. In Palestine (Palestinian Authority, PA), as with many developing countries, medicinal plants play an important role in primary health care. They are widely used in Traditional Arabic Palestinian Herbal Medicine (TAPHM), for health maintenance and to treat various illnesses including chronic diseases (Ali-Shtayeh, Jamous, & Jamous, 2011a). There are many different types of complementary and alternative treatments believed to be effective for treating high blood pressure (hypertension). Scientific evidence indicates that-in addition to a diet that is low in saturated fat and salt and rich in complex carbohydrates (vegetables, whole grains, legumes, and fruits)-increased physical activity and regular practice of relaxation techniques such yoga, Tai Chi, or Qigong could help to lower high blood pressure. Evidence shows that men and women of all age groups who are physically active have a decreased risk of developing high blood pressure. Findings from multiple studies indicate that exercise can lower blood pressure as much as some drugs can. People with mild and moderately elevated blood pressure who exercise 30 to 60 minutes three to four days per week (walking, jogging, cycling, or a combination) may be able to significantly decrease their blood pressure (Hypertension/High Blood Pressure Health Center, 2011). Recent evidence suggests that hypertension and certain cardiovascular diseases can be improved by treatment with acupuncture. Peng Li defined the neuronal pathways responsible for the long-lasting effect of electroacupuncture on blood pressure in a rodent model and demonstrated that low-frequency electroacupuncture activates opioid receptors and provides a therapeutic effect on hypertension. Conversely, high-current electroacupuncture activates the cholinergic system and leads to increased blood pressure, which alleviates shock and bradycardia (Lin, Nahin, Gershwin, Longhurst, & Wu, 2001). For herbal therapies, the efficacy and safety of them, such as

Rauwolfia serpentina (snakeroot), *Stephania tetrandra* (tetrandrine), *Panax notoginseng* (ginseng), and *Crataegus* species (hawthorn) for treating high blood pressure have not been extensively studied. Because of potential health risks associated with these herbs, it is imperative that you inform your doctor if you plan to use or are already using them. This is even more important if these herbs are used in combination with high blood pressure drugs. Some herbs, such as licorice, ephedra (Ma Huang), and yohimbine (from the bark of a West African tree) should not be used by people with hypertension because they can increase blood pressure (Hypertension/High Blood Pressure Health Center, 2011). Aims and Objectives: The present study sought to evaluate the prevalence and factors related to the use of herbs by patients living with hypertension, to discuss the demographic details of these patients and to identify perceived benefits from herbal therapy use. The study also aimed to identify sources of information recommending the use of a particular herb and the underlying reasons for using herbal therapy. One of the main objectives was to ascertain whether patients had discussed their use of CAM with their physicians.

2 METHODS

The study took the form of a cross-sectional survey of patients attending the outpatient departments at the Governmental Hospitals in Nablus and Hebron. Also special interviews in patient's homes in different cities including Hebron, Bethlehem, Jerusalem, Ramallah, Nablus, Jenen, Tolkarem, Galgeli. To ensure a representative cross-sectional sample of the hypertension out patients, interviews were conducted on different days and times. The study included both males and females of different age groups. The method was based on the use of a semi-structured questionnaire. All participants were fully informed that the study was exploring their use of herbal medicines in combination with prescribed medications. Patients were assured that all information was confidential and would only be used for research purposes. The study took place between October 2011 until December 2011. The vast majority of the questions had pre-formulated answers. Interviews took approximately 20 minutes to complete. The

questionnaire is represented in (Table A1). An a priori level of significance was set at 0.05.

3 RESULTS

Of the total 83 patients interviewed , 57 were females (69%) and 26 were males (31%) patients . The majority of the interviews were >60 years of age (n=32, 39%) and the lowest of the interview were <40 year of age (n=7, 8%), while the middle of the interview were 50-59 years of age (n=25, 30%), the percentage of the married individual with hypertension is very high (n=62, 75%), and singles were (n=5, 6%) while the percentage of widowed with hypertension (n=16, 19%) and the all widowed with hypertension were above fifty years old. 24 patients in the study had the primary school (29%). 25 of patients (30%) in the study had illiterate level. The highest cases of the hypertension patients were recorded from Hebron city (n=54, 65%). Most patients with hypertension have diabetes (41.3%), obesity (41.3%) and heart disease (34.9%) (Table 2).

Numbers and Percentages of Other Chronic Diseases

Disease type	Number	Percentage
Diabetes	26	41.3%
Asthma	5	7.9%
Obesity	26	41.3%
Heart disease	22	34.9%
Gout/Arthritis	9	14.3%
Other (please specify)	1	1.6%

Among interview, the total number of CAM users was (n=49, 59.0 %) using different type of herbs that is shown in Table 1 (Ali-Shtayeh et al., 2011a; Biodiversity & Environmental Research Center (BEREC), 2011). The majority users preferred the use of crude extraction in the form infusion in hot water. The source of most herbs that the patients used as a complementary and alternative for hypertension treatment were from Palestine. The most commonly used plants were *Allium sativum* (Liliaceae) (n=23, 20.5%), *Matricaria aurea* (Asteraceae) (n=13, 11.6%), and *Anisum vulgare* (Apiaceae) (n=10, 8.9%). The main sources of recommendations for herbal products were from family (n=27, 32.5%) and friends (n=19, 22.9%), followed by media (n=7, 8.7%). More than 37% of herbal medicine users (n=31, 37.3%) believed that the herbal preparations would play the role of relieving symptoms of the disease, but also the same number of patients were not sure about the objective. Other reasons included slowing down the progression of their disease (n=12, 14.5%). The patients who achieve the sought effect after using herbs were (n=19, 22.9%), but the majority of them were not sure. The majority of herbal medicine users (n=66, 79.5%) did not discuss the CAM use with the physicians. The use of CAM did not differed significantly between residents of refugee camps versus residents of urban or rural areas (p=0.259). Also, no statistically significant association was identified between users and non users of CAM in terms of gender (p=0.527),age (p=0.961), marital status (p=0.969), educational level(p=0.617) (Table 3). Other types of CAM practices were identified among the 83 hypertension

patients included: relaxation (n=33, 39.8%), diet (n=22, 26.5%), honey (n=15, 18.1%), prayer (n=13, 15.7%) and fasting (n=9, 10.8%) (Figure 1).

Table 3. Distribution of Plants Use According to (Gender, Age, Marital status, Educational level, and Place of Residence)

Variable	Yes		No		p value*
	Number	Percent	Number	Percent	
	Total Percent				
Total	49	59.0%	34	41.0%	
Distribution of use of plants according to gender					
Male	15	31%	11	32%	0.527
Female	34	59%	23	68%	
Distribution of use of plants according to age					
<40	4	8%	3	9%	0.961
(40-49)	9	18%	10	29%	
(50-59)	14	29%	8	24%	
>60	22	45%	13	38%	
Distribution of use of plants according to marital status					
Single	3	8%	2	6%	0.969
Married	7	18%	25	74%	
Widowed	39	76%	7	20%	
Distribution of use of plants according to education level					
Illiterate	12	24%	13	38%	0.617

Table 3/ cont.

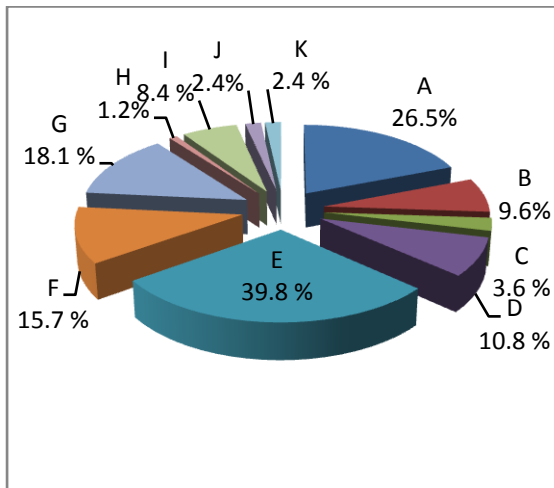
Variable	Yes		No		p value*
	Number	Percent	Number	Percent	
	Total Percent				
Primary School	16	33%	8	24%	
High School	12	24%	9	26%	
Diploma	6	12%	2	6%	
Bachelor Degree	2	4%	2	6%	
Graduate studies	1	2%	0	0%	
Distribution of use of plants according to residence					
City	11	22%	3	9%	0.259
Village	36	73%	29	85%	
camp	2	4%	2	6%	

*p value was determined by chi-square.

Figure 1. Percentages of citizens used other kinds of CAM for hypertension (non herbal medicines).

CAM kinds :

- A, diet;
- B, exercise;
- C, massage;
- D, fasting;
- E, relaxation;
- F, prayers, reading holy book;
- G, honey;
- H, energy therapies;
- I, natural products;
- J, animal products;
- K, magic.



4 DISCUSSION

CAM is widely used among hypertension patients throughout the world. The present study is the first attempt to identify and quantify the prevalence of the use of herbal medicines among a sample of hypertension patients in Palestine. In 2010, the cardiovascular diseases incidence percentage in the West Bank (PA) was (25.4%) (Ali-Shtayeh, Jamous, & Jamous, 2011b). Hypertension is the most common cardiovascular disease and a major public health problem in both developed and developing countries (Rout, Dutta, Sengupta, Das, & Rout, 2010). In the PA, it is reported that a vast majority of the population still uses herbal medicine, indicating a deep rooted belief in the healing potential of plants. Several population-based studies, have demonstrated widespread use of herbal medicine as the most preferred CAM modality (Ali-Shtayeh et al., 2011a). The number of herbs used by hypertension patients in the present work (31 species). In the present study herbs most commonly used included *Allium sativum*, *Matricaria aurea* and *Anisum vulgare* (Table 1). Recent studies have indicated the anti-hypertensive activity of these plants. *Allium sativum*, this wonder herb not only helps normalize blood pressure, it also reduces cholesterol. In a scientifically rigorous study, people with high blood pressure were given about one clove of garlic a day for 12 weeks. Afterward they exhibited significantly lower diastolic blood pressure and cholesterol levels (Duke, 1997). Based on the popularity of herbal medicine among Palestinians in the treatment of a large number of ailments and diseases, it was not unexpected that the percentage of herbal medicines users will also be high amongst patients with

hypertension (about 59.0% in this study). Ease of accessibility, lower costs and social acceptability in the use of medicinal herbs in Palestine, as well as the long history and experience of traditional use of these herbs encourage patients to believe in their healing effects also the majority of CAM herbal remedies used by the study group were purchased locally. This could also reinforce availability and acceptability of herbal use (Ali-Shtayeh et al., 2011a). In Africa, 80% of population depend on CAM, including herbal medicines (Akinola, 2011). Furthermore, Osamor and Owumi (2010) studied the use of CAM among hypertensives in Idikan community of Ibadan, Nigeria. A total of 440 hypertensive subjects were studied. Among these, 29% used CAM as anti-hypertensives. Out of these, 21% used garlic, while 63% used other herbal preparations (Akinola, 2011). The percentage of garlic use (21%) is close to our result (23%) in this study. An alarming result was that 79.5% of patients had never discussed their herbal remedy use with their physicians. This indicates a lack of patient awareness of the dangers that may accompany the unsupervised use of drugs and or herbs concurrently. It also raises questions regarding whether physicians sufficiently explore their patients self-use of other forms of treatment. The self administration of herbs use in conjunction with conventional medicines without disclosure of CAM use to health care professionals may result in ineffective hypertensive management and adverse treatment side effects. Thus it is strongly recommended that, CAM information be incorporated into clinical practice as well as patient and professional education (Ali-Shtayeh et al., 2011a). In Palestine, herbal medicine use in patients with hypertension was previously unknown. Our survey confirms that there is an appreciable prevalence of herbal use in patients with hypertension in this country. More females than males use herbal therapies from 83 subjects, 34 (59%) were female, 15 (31%) male. Older patients (>60) residing rural areas were also more likely to use CAM in form of herbal medicines. Although patients were satisfied with the outcomes of herbal therapy, the majority lacked an appropriate awareness of potential risks of pharmaceutical interactions between herbs and prescribed medicines. There is a need for greater information to be made available about possible adverse effects.

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5 REFERENCES

- [1] Akinola, O. B. (2011). Should Complementary and Alternative Medicine Familiarisation Modules Be Taught In African Medical Schools?: Medical Education. *Journal of Chinese Integrative Medicine*, 9(11), 1165-1169.
- [2] Ali-Shtayeh, M. S., Jamous, R. M., & Jamous R. M. (2011a). Complementary and alternative medicine use amongst Palestinian diabetic patients: Complementary Therapies in Clinical Practice. UK: Elsevier Ltd.
- [3] Ali-Shtayeh, M. S., Jamous, R. M., & Jamous R. M. (2011b). Herbal preparation use by patients

- suffering from cancer in Palestine: Complementary Therapies in Clinical Practice. UK: Elsevier Ltd.
- [4] Biodiversity & Environmental Research Center (BERC). (2011). "Elk'aema AL-Watania Al-Falastenia Li Nabatat Atbia Li A'm 2008" [Palestinian national list of medicinal plants for 2008]: BERC - Database for Plants used in Traditional Arabic Palestinian Herbal Medicine-TAPHM. <http://berc-taphm.com/>
- [5] Duke, J. A. (1997). The green pharmacy: New discoveries in herbal remedies for common diseases and conditions from the world's foremost authority on healing herbs. Pennsylvania: Rodale press.
- [6] Hypertension/High Blood Pressure Health Center. (2011). Complementary and Alternative Treatments for High Blood Pressure. <http://www.webmd.com/hypertension-high-blood-pressure/guide/hypertension-complementary-alternative-treatments>
- [7] Lin, M. C., Nahin, R., Gershwin, M. E., Longhurst, J. C., Wu. K. K. (2001). State of Complementary and Alternative Medicine in Cardiovascular, Lung, and Blood Research. American Heart Association, Inc.
- [8] Osamor, P. E., Owumi, B. E. (2010). Complementary and alternative medicine in the management of hypertension in an urban Nigerian community. BMC Complementary and Alternative Medicine, 1-9.
- [9] Rout, S. K., Dutta, S., Sengupta, M., Das, S., Rout, B. (2010). Antihypertensive Therapy: The Concepts Of Management With Herbal And Synthetic Agents For Pulmonary Hypertension. International Journal of Pharmaceutical Sciences Review and Research,3(2), 72-79.