Describe the use of Alternative Medicine in the treatment of Diabetes Mellitus

Abstract

Introduction: Diabetes is a chronic metabolic disorder whose hallmarks are hyperglycemia accompanied by persistent damage, dysfunction and failure of various organ systems. **Objectives of the study:** To assess the frequency of use of alternative medicine for Diabetes Mellitus. **Methodology of the study:** This cross sectional study was conducted during June 2019 to April 2020 at Sahiwal Medical College, Sahiwal. Data regarding prevalence of CAM usage in Pakistan, is not available. Thus, to calculate sample size, prevalence of India is being used which is 67%. **Results:** The data was collected from 400 patients and there was 167 male and 233 female. The mean age was 52.93±12.97 years. There are 113 patients who was suffering from diabetes from less than 5 years and almost 187 patients who was suffering more than 10 years. There was 189 patients who have good diabetic control as compared to others. There are 158 patients who used CAM for diseases control. **Conclusion:** It is concluded that patients might be less compelled to seek a CAM therapy or any other medical therapy if they have relatively few symptoms.

Introduction

Diabetes is a chronic metabolic disorder whose hallmarks are hyperglycemia accompanied by persistent damage, dysfunction and failure of various organ systems. [1] Its worldwide prevalence in 2013 stood at 347 million. [2] The prevalence in Pakistan was recorded as affecting 12.9 million people (10%) in 2011. [3] There is a fast emerging trend in the modern world for usage of Complementary and Alternative Medicine (CAM), in order to accomplish improved disease control. [4] CAM encompasses herbal remedies as well as other forms of therapy such as acupuncture, spirituality, energy therapies, and yoga.[5] It can formally be

defined as, “A collection of medical and health systems, practices and products, not presently considered a part of Allopathic medicine.”[6]

Worldwide disposition of CAM usage for diabetes has seen an increase ranging between 30%-57%. [7] Malaysia has a 62.5% prevalence of CAM usage. [8] India, a country similar in traditions, mindset and practices to Pakistan has recorded a very high rate of CAM usage -67%- among its diabetics. [9] No studies to assess prevalence of use among diabetics has been done in Pakistan, however there has been extensive work on the properties of the herbal medicine used.[10] Attractiveness of CAM use for Diabetes can be attributed to perception of decreased adverse effects, convenience, cost-effectiveness, dissatisfaction with conventional medication and positive reviews from other users.[11]

Diabetes is quickly becoming a front runner of morbidity and mortality in today’s times. It’s ever increasing prevalence is almost being paralleled by an increase in people looking towards alternative medication, even without strong evidence of its efficacy. [12] Pakistan is currently placed 7th on the diabetes prevalence list by WHO, with its position expected to rise in the next few years.[13] Keeping this in mind, our study seeks to assess the frequency and effects of said treatments. Additionally, we hope to also get a glimpse into the thoughts and patterns of use regarding CAM. Gaining a better understanding of these treatments, as well as their advantages and disadvantages, may help start to bridge the communication gap between medical professionals and patients regarding alternative methods of treatment.

Objectives of the study

1. To assess the frequency of use of alternative medicine for Diabetes Mellitus.
2. To characterize the use of Alternative Medicine in diabetics, including homeopathy, herbal medicine, acupuncture and spirituality.

Methodology of the study

This cross sectional study was conducted during June 2019 to April 2020 at Sahiwal Medical College, Sahiwal.

Sample Size – Data regarding prevalence of CAM usage in Pakistan, is not available. Thus, to calculate sample size, prevalence of India is being used which is 67% [14]

$$n = \frac{z^2 p (1-p)}{d^2}$$

$$= \frac{(1.96)^2(0.67)(0.33)}{(0.05)} = 339$$

If we consider 20% wastage, the final sample size becomes,

$$\boxed{n = 380}$$

Sampling Technique – Non-probability Purposive Sampling

Sample Selection – **Inclusion Criteria:** Diagnosed Type 1 and Type 2 Diabetics in medical OPDs.

Exclusion Criteria: 1.Non-Diabetics
2. Those who refused to participate.
3. Those with Gestational Diabetes.

Data Collection Procedure

The investigations was carried out using pretested, self-administered questionnaires as well as personal interviews conducted by the investigators when needed. Informed consent was obtained from all the participants, assuring them of anonymity.

Ethical Considerations – Bilingual questionnaires was prepared (English and Urdu). Individual data was not shared unless the patient consents. Anonymity was maintained at all stages.

Data Management and Statistical Analysis – Data entry and analysis will be done on SPSS v20. All categorical variables will be presented as percentages and frequencies. All numerical variables will be presented as mean and + standard deviation. Chi square test will be used to determine the association between categories. p-value of <0.05 will be considered significant.

Results

The data was collected from 400 patients and there was 167 male and 233 female. The mean age was 52.93±12.97 years. There are 113 patients who was suffering from diabetes from less than 5 years and almost 187 patients who was suffering more than 10 years. There was 189 patients who have good diabetic control as compared to others. There are 158 patients who used CAM for diseases control.

Table 01: Use of CAM in selected individuals

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	158	39.5	39.5	39.5
	No	242	60.5	60.5	100.0
	Total	400	100.0	100.0	

Table 02: Gender with faith in spiritual healing (Chi-Square test)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.559[a]	2	.102
Likelihood Ratio	4.523	2	.104
N of Valid Cases	400		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.93.			

Table 03: Diabetes control * is spiritual prayer effective

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.701[a]	4	.153
Likelihood Ratio	6.668	4	.154

N of Valid Cases	400		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 12.38.			

Thirty-nine percent of the respondents with diabetes reported CAM use specifically for treatment of the disease (an estimated 3.6 million people in the US population). This condition-specific CAM use primarily involved solitary prayer or other spiritual practices (28%), although there was modest use of commercial diet programs for weight loss or gain and modest use of herbal therapies (about 6%–7% each). Only a few respondents reported use of folk remedies, self-help groups, relaxation/meditation, high-dose megavitamins, and homeopathy for diabetes. No respondents reported use of chiropractic, acupuncture, lifestyle diets, yoga, or massage for diabetes. Stratified analyses showed no significant differences between insulin-treated patients and non-insulin-treated patients in rates of CAM use in the past year.

Discussion

Our analysis suggests that although persons with diabetes use CAM therapies at a rate similar to that among the general population, they do not seem to be using CAM specifically for their diabetes. With the exception of solitary prayer, reported CAM use for the treatment of diabetes was relatively uncommon [15].

Previous studies of CAM use among persons with diabetes have been limited to convenience samples or highly selected ethnic populations. These studies have reported a wide range of CAM use, from use of herbs among 9% of low-income Mexican American patients in Texas to use of "traditional home remedies" among 65% of immigrant Vietnamese patients in California. In the only other national study, Egede and colleagues, using the 1996 Medical Expenditure Panel Survey, reported that 8% of persons with diabetes used CAM, a rate considerably lower than our estimate [16]. Their analysis, however, was limited to CAM use in association with a professional visit and thus probably understated overall CAM use.

In contrast, surveys of other specific populations have suggested higher rates of CAM use among persons with various chronic conditions (e.g., 42% among patients with asthma/rhinosinusitis, 80% among those with cancer, 68% among those with HIV, and 54% among those with amyotrophic lateral sclerosis). However, it is not always clear whether use is condition specific, and in some instances this may be difficult to define [17]. For example, Fairfield et al. found that many patients with HIV use CAM to relieve pain, neuropathy, stress, depression, and nausea that might be associated with the primary illness; however, few use CAM for specific antiviral effects or to cure HIV [18].

Conclusion

It is concluded that patients might be less compelled to seek a CAM therapy or any other medical therapy if they have relatively few symptoms. Unlike other conditions involving acute symptomatic crises, such as asthma or pain syndromes, the only reminder of the presence of diabetes may be an abnormal blood sugar value, particularly early in the course of the disease.

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