DIABETES MELLITUS TREATMENT USING HERBAL DRUGS

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Abstract. *The use of herbs is common among diabetics. The aim of this study is to determine the prevalence of the use of herbs among diabetics and which herbs are used. Additionally, to investigate the effect of some demographic characteristics on the use of such herbs.*

Key words: *alternative medicine, blood sugar, teucerium oliverianum, remedies, dietary approaches, Aerial parts, fruits, bulb, flowers.*

ЛЕЧЕНИЕ САХАРНОГО ДИАБЕТА С ИСПОЛЬЗОВАНИЕМ ТРАВЯНЫХ ПРЕПАРАТОВ

Аннотация. *Использование трав распространено среди диабетиков. Целью данного исследования является определение распространенности использования трав среди диабетиков и того, какие травы используются. Кроме того, изучение влияния некоторых демографических характеристик на использование таких трав.*

Ключевые слова: *альтернативная медицина, уровень сахара в крови, teucerium oliverianum, средства, диетические подходы, надземные части, плоды, луковицы, цветы.*

The use of alternative medicine (AM) has increased recently and attracted the attention of many researchers all over the world. This interest has been accentuated by a concern that such treatment may be harmful to the patients despite their apparent innocuousness. The scope of alternative medicine is enormous and includes all therapeutic procedures or practices which lie outside the mainstream of medical practice. They may be differentiated into pharmacological category (namely herbal treatments or homeopathy), physical remedies (acupuncture or chiropractics), dietary approaches (macrobiotics or vegetarianisms) or cognitive treatment (hypnosis).

A survey of different regions of Kingdom of Saudi Arabia (KSA)revealed that a large number of herbal drugs are used for the treatment of diabetes. Twelve of these antidiabetics plants were identified. Three of them possess significant oral hypoglycemic activity in mice (teucerium oliverianum, Hammada salicornica and Allium Cepa); 3 plants showed moderate activity (Artemisia abyssinica, Azadirachta indica and loranthus curviflorus). Five plants were found to possess no significant activity (Phazya stricta, Mormordica charantia, Aloe vera, Allium

sativum and Coriandrum sativum) and one plant (Moringa oleifera) rather increased the blood glucose.

Medicinal plants use in South Western KSA were studied and the most common plants found belong to the leguminosae, labiatae, compositae and euphorbiacease families. The form in which the herbs were used was described by El-Sheikh in his survey of the most important medicinal plants in Qasim, KSA. The most frequent forms were the solutions of the dried leaves and flowers, the dried leaves alone, the volatile oils and the crushed fresh shoot. In Mossa study the parts of the plants which were used include the leaves, the Aerial parts, the fruits, the bulb, the flowers or the whole plants. Patients tend to use AM more in chronic disease conditions and diabetes mellitus is one of those conditions in which most patients tend to seek help. It has been reported that more than 400 herbal remedies are available for use by diabetics worldwide.

American diabetics of Mexican origin showed a higher interest in AM with as many as 67% of them were reported using folk medicine. Researches, in recent years, have suggested that some herbal therapies may have a role in the treatment of diabetes mellitus.However, many questions remain unanswered regarding the proper use of herbal therapies for those diabetics particularly with regards to dosage and the presence of contaminants.The anti-diabetic activity of Aloes was studied in 5 patients with non-insulin dependent diabetes (NIDDM) and there was a significant reduction in fasting serum glucose indicating that aloes has a hypoglycemia effect. It has also been reported that a plant mixture extract comprising of Nigella Sativa, Myrrh, Gum olibnum, Gum Asafoetida and Aloe to have a blood glucose lowering effect. Another study on rabbits demonstrated the hypoglycemic effect of Nigella sativa with no attention of the based insulin levels. The use of AM in diabetes may be harmful in 2 ways: 1. Is related to its possible side effects and the other is the high probability of non-compliance with medical treatment that may accompany the use of AM. Since the use of herbs is common among diabetics and some herbs appear to have a role in the treatment of diabetes mellitus, this study was carried out on a group of diabetic patients to determine the prevalence of the use of herbs. Additionally, the study aims at investigating which herbs are used as well as the effect of some demographic characteristics on the use of such herbs. The use of herbs is not a new issue as herbs were known for a long time and had been used by many people to treat a variety of diseases. Doctors will need to keep track of this practice and they need to know more with regards to herbs as they may improve or worsen the outcome of treatment of their patients. Diabetes is one condition in which herbs are frequently given as they are expected to have a major role in the treatment of the disease. The present study has shown that 17.4% of the diabetic patients had used herbs in the last year. The real percentage may be more than that if the duration of the study of herbal use was extended for more than a year.

Most of these patients had listed a variety of herbs for the treatment of their diseases but few patients were regularly using them. About one-third would abstain from using medical treatment when they were using the herbs. The popularity of the herbs for the treatment of patients with chronic diseases may be attributed to the long-standing suffering of the patients or failure of the medical treatment to bring a quick and long-lasting relief. The most frequent types of herbs used among our patients were myrrh, black seed, helteet and fenugreek. In another study which was conducted on American patient's of Mexican origin the most frequent herbs used were Nopal and Aloe Vera. In Morocco, fenugreek was the first in the top 10 most recommended antidiabetic plants while in Quebec, Canada, blueberry was the herb most frequently used. This variation could be related to the availability of these herbs in certain communities than others and also tradition and habits may play a role in their choice. Patients who took the herbs according to a friend's advice in this study were 42% and this may draw attention to the importance of health education to the community. If they were well informed this might be reflected in the kind of advice, they had given. Education regarding the use of herbs is a good area to be tackled in the field of health education. Proper health education can also persuade a higher percentage of diabetic patients to inform their doctors regarding their use of herbs.

Indeed, the present study shows that 73% of herbs users did not inform their doctor regarding it. Although 49% of herbs users are not satisfied with it but still many of them intend to use them again. The reuse of herbs may be influenced by anxiety, as some of them stated or could be due to a friends advice. In this study, the use of herbs, did not seem to have a significant relationship with whether the blood sugar was properly controlled. It should be stated, however, that there were no standard measures for a good or a bad control of blood sugar level and this was left entirely to the patient's judgment. Physician should acknowledge their poor knowledge on herbs that are used by patients. This does not mean ignoring the problem as a whole since a large number of patients are using them. On the other hand, many researches had addressed the antidiabetic effects of some herbs and plants.

Conclusion: Diabetes mellitus is a most common endocrine disorder, affecting millions of people worldwide. It is a group of metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion, insulin action, or both. The increase in resistance and populations of patients at some risk, in conjunction with the restricted number of commercially available drugs for diabetes that still present have many side effects and also problems like unwanted hypoglycemic effect are the cause to shift the research towards traditionally available medicine which have low side effect and wide range of bio activity and do not require laborious pharmaceutical synthesis seems highly attractive.

From this review article, it may be useful to the health professionals, scientists and scholars to develop evidence-based alternative medicine to cure different kinds of diabetes problem using herbal preparation. Substances and extracts isolated from different natural resources play very important role to design medicine and treat hyperglycemic problem in diabetes mellitus.

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