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Letter to the Editor/Editöre Mektup

The Usage Of Plants as a Traditional and Complementary Medicine Among Diabetic Patients in Karachi, Pakistan: an Urgent Need of Educational İntervention

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Dear Editor,

Traditional and complementary medicine (TCM) usage has been increasing throughout the globe in developed as well as developing countries.[1, 2] TCM can be defined as developed health care approaches outside of Western/conventional medicine. [3] Diabetes mellitus (DM) is a common health threat throughout the world. Herbs, spiritual healing, relaxation techniques, nutritional supplements, and counseling are the most common complementary therapies.[2, 4] The estimated prevalence of DM was 285 million in 2010 throughout the globe. It is predicted to increase up to 485 million, which representing 7.7% of the adult population by 2030.[4, 5]

Pakistan is a populated country and consist of 207.7 million peoples (area of 796095 km^2). According to the recent survey, the prevalence of DM ranging from 7.2% to 19.21% in different regions of the country.[6] The current condition about the TCM usage among Pakistani diabetic patients was poorly explored. Therefore, the primary objective of this pilot study was to explore TCM usage in DM patients. The secondary goal was to assess attitudes, perception, and beliefs of DM patients towards TCM in Karachi, Pakistan.

A one-month cross-sectional and questionnaire-based study was carried out in a government-based teaching hospital in Karachi (Pakistan) during January 2019. Adult population having diabetes and interact with TCM for treatment purposes were evaluated. The simple random sampling technique was used for the participant's enrollment. A participant has a full choice to accept or reject to participate in the study. All the information collected via a validated questionnaire and then data were entered into the Statistical Package for Social Sciences (SPSS) for further analysis.

A total of 100 individuals was investigated during the study period. The sample were mostly male (n= 62), came from rural (n= 77), aged group 30-59 years (n= 83), and 56 patients had illiterate status. The ratio of type-2 patients (n=89) was higher than as compared to type-1 DM patients (n=11). Out of these patients, the prevalence of

clinical characteristic included anxiety (47.1%), chronic pain (33.9%), arthritis (30.6%), concomitant heart disease (20.7%), digestive problems (22.3%), renal disease (15.7%) and allergies (4.1%).

More patients (n=68/100*100, 68%) considered conventional therapy more effective for diabetes, while 7 (7%) reported TCM and 25 (25%) favored TCM plus conventional treatment strategies. Five (5%) patients were completely better, 35 (35%) reported satisfactory improvement and 60 (60%) reported no change after TCM usage for diabetes. Out of all the patients, 47 (47%) patients recommend CAM usage, however, 53 (53%) didn't in favor TCM utilization in the treatment of DM.

Caralluma tuberculata (n= 11), Solanum surrattens Burm. f. (n= 10), Fagoniacretica (n= 6), Justicia adhatoda (n= 6), Consolida ambigua(n= 5), Vernonia amydalina (n= 4), Ajuga Parviflora Benth (n=3), Nigella sativa (n= 3), Carum carvi (n=2), Berberis lycium Royle (n=2), Trigonella emodi Both. (n= 2), Abelmoschus esculentus (n=2) and Citrulus colocynthis (n=2) were the most frequently TCM products. The patients further reported that these TCM products were freely available at low cost and most often recommended by a friend, neighbor, relative and physician. Another interesting fact was that ethnomedicinal local plants in Pakistan such as Caralluma tuberculata and Solanum surrattens Burm.f. were the most frequently used TCM and highest satisfaction level among DM patients.

The use of TCM products among the adult DM patients was reported in this study. The different type of attitudes, perception, and beliefs towards TCM was also revealed. The patients did not report any side effects of TCM use for treatment of DM, but adverse events and side effects have been well reported previously, hence, further empirical-evidence should require and necessary about guidance on the safe and appropriate use of TCM.

Therefore, the implementation of government policy, adequate information to the public regarding TCM, rigorous evidence-based guidelines and policies to regulate TCM usage is urgently required at the national and global level. These types of interventions are necessary for the effective, safe and economical usage of TCM. Cultural beliefs, education of patients and ethnic background also play a role in CAM usage, thus, educational intervention to patient about TCM is a crucial step for the improved knowledge of patients and better health care.

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