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Sociocultural Factors Influencing the Selection of Diabetic Patient Treatment: Empirical Treatment Vs Drug Treatment

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Abstract:- This document sets out the results of an investigation that had as its main objective to determine the sociocultural factors that influence the preference of the diabetic patient to empirical-traditional treatment over the pharmacological treatment of the Health Center of Las Margaritas, Chiapas, Mexico. A cross-sectional study was conducted, involving 100% of diabetic patients who are given care at the Health Center. The information was obtained by applying a Likert scale and was supplemented by open questions. Among the most relevant findings, 37% of patients were found to be in the age range of 60-69 years; 15% had diabetic glaucoma as the main complication and 57% are being treated with 850 mg metformin. Moringa is the most consumed plant, as an empirical-traditional treatment at 61%.

Keywords:- *Empirical Treatment, Diabetes Mellitus, Medicinal Plants.*

I. INTRODUCTION

Medicinal plants have been considered the origin or starting point for the development of medicines, as they have contributed to the discovery of new substances with biological activity and to the production of phytotherapeutics. They are also the source of medicines of greater cultural accessibility for most Latin American countries, coupled with economic accessibility. Popular and scientific knowledge of medicinal plants has largely contributed to primary health care, mainly in less developed countries, as a safe source available to most people. It is common to use in the form of dried, fresh plants, aqueous extract, or infusion, or such as phytotherapeutics (Acosta-Recalde et al, 2018).

Diabetes mellitus (DM) is known to be a silent condition, as the patient does not have discomfort at the beginning of the disease, will only be very thirsty or eager to urinate, as well as increased feelings of hunger and weight loss; but culturally they are signs that the population does not associate them with health problems immediately.

In 2014, 422 million cases of adult DM were reported globally compared to the 108 million in 1980. By 2040, this number is expected to rise to 642 million people with the condition. The global prevalence of DM has almost doubled since that year, from 4.7% to 8.5% in the adult population. In the last decade, the prevalence of diabetes has increased faster in low- and middle-income countries than in high-income countries (IMSS, 2018). This presupposes an increase in related risk factors such as overweight or obesity.

The WHO (2016) considered DM to be one of the world's leading public health conditions, and health personnel should seek actions to help prevent and control. Since this disease, along with others, has an impact on public health, and in the high costs of its control and hospitalization cases.

The choice of allopathic drugs that people have for the treatment and control of DM include insulin and various oral antidiabetic agents, such as sulphonylureas, biguanides, alpha-glucosidase inhibitors and glinides, which are used as monotherapy or in combination to improve glycemic regulation. Several of these antidiabetics have adverse effects and in the control of chronic diabetes lose their effectiveness. Managing diabetes without adverse effects has become a challenge. This also has an impact on high costs for public health care, as they are treatments that patients need on a permanent basis. This often leads to the search for more effective and safer therapeutic options, which requires further research processes (García, 2009).

DM is among the top 10 causes of death worldwide. Mexico has also been in the top of obesity, coupled with poor nutrition and lack of physical activity (Fabián et al, 2010). It is of great importance to know why the diabetic patient abandons his drug treatment, within what some economic, religious, and sociocultural factors are known.

Specifically, this research is contextualized within an area with high cultural diversity and customs-uses that relate to the use of medicinal plants as the main treatment route; even more so when it is Mayan cultural groups, with heavily rooted customs and customs.

This article sets out the results of a study that had the main objective of determining the sociocultural factors that influence the diabetic patient's preference for empirical treatment over drug treatment. This study was conducted at the Las Margaritas Health Center, Chiapas, Mexico.

II. METHOD

The study was conducted from June 28 to December 31, 2019 at the Centro de Salud Urbano de Las Margaritas, Chiapas, Mexico. The study population was no. 330 diabetic patients who came to the Health Center for Consultation.

A survey was applied using a previously developed questionnaire, of a mixed nature, Likert scale, supplementing with open questions that would allow us to know the cause of abandonment of drug treatment based on *glibenclamide*, *metformin*, *insulin* and replace it with empirical-traditional treatment based on plants.

III. DISSCUTION

As diabetes mellitus is known, it is a common condition today, it is a chronic disease and is a public health problem of international relevance. For North America, the literature mentions that by 2025 they will increase from 15 million to 22 million diabetics, obviously this dramatic increase correlates with obesity and sedentary lifestyles. In Latin America, an overall prevalence of 5.7% is estimated and by 2025 it is 8.1% (Grundy et al, 2002; Rosenzvveig, 2020).

For Mexico, poor nutrition in most of the current population is a major risk factor for diabetes mellitus, accompanied by intense sedentary lifestyle and genetic burden in many cases. When we talk about the state of Chiapas and especially the Upper Chiapas Region, a predominantly indigenous area, we find sociocultural barriers that have an impact both on the course of the disease and on the treatment and control of this.

General data of the study population. The frequency per sex was represented by 161 women and 169 men. The average age of diabetic patients was identified in 60 to 69 years, with 36.96%, comparable to what was found by Ariza et al (2005). In the case of diabetes, age acts as a cumulative risk factor for its development, as in other chronic noncommunicable diseases. Like also, we should bear in mind that patients reported having started with symptomatology for 15-20 years; but due to the lack of laboratories and economic problems they did not know about it until several years later.

As for their work activity, most patients, women, housewives, dedicated to household activities. Factors that are closely related are the high number of pregnancies, sedentary lifestyles, and poor diet with high consumption of carbohydrates, bottled soft drinks and sugars.

The educational level of patients is incomplete primary covering (44%), followed by full primary (29%) (23%), or 96% of patients have a basic level of schooling and even incomplete. It is important to mention that, in Las Margaritas, Chiapas, if you have access to education, in terms of infrastructure; but cultural barriers, uses and customs also prevent the use of this resource by the population.

Coinciding with what Serral and Chichet found (2003) on the prevalence of diabetes in patients according to educational level, this study found greater metabolic control in patients with an educational level higher than the basic level (4%). This is because the population with the highest level of instruction can more easily access information about disease control or understand treatment and self-care indications. It is the latter people who find themselves with better glycemic control only by taking pharmacological treatment (*Glibenclamide* 5mg, *Metformin* 850mg, *Insulin*), referring better control.

On the other hand, patients do not have a constant economic income, so the expenses for the control of the condition, generates situations of stress and disgust on the part of the family. Coinciding with Castro and collaborators (2014), within the findings in this research, it is stated that the reluctance of patients to accept that they suffer from diabetes mellitus, as well as to keep a pharmacological check and they decide, first, to explore treatment with medicinal plants that cure diabetes. The article by Reyes and Collaborators (2019) "Medical plants: habits in Chamula, Chiapas, Mexico" mentions that patients use herbal treatments for their health care and that they go to the doctor only if the health problem persists, is complicated and they no longer manage to control it; proven reality also in this study.

Therapeutic approach between pharmacological treatment and empirical-traditional alternative treatment. According to the results obtained, the most common complication is diabetic glaucoma (15%), followed by the diabetic foot (10%). Results coincide with the analyses of Wong et al (2009); Alegre et al (2016) and Lugo-Palacios et al (2016). It is until the time of complications, when the patient decides to go to the medical unit for evaluation and represents more expenses for both the patient and the health institution (IMSS, 2018). In addition to the above, Libertad (2014), mentions that due to the complications of the patient will generate losses from a personal, social, and family point of view.

When patients go to assessment, control and follow-up to medical units and begin to be treated with pharmacological therapy, they refer to discomfort in the digestive system (gastritis, colitis, clumps, constipation, stomach flu) so, the patient decides to decrease or abandon treatment and avoid such discomfort. At this time, the patient decides to use alternative treatment based on plants and seeds for the control of diabetes mellitus.

Within the results found, most patients using empirical treatment said they felt much better about their digestive system as no discomfort occurred and reported that they

were equal or better controlled with glucose. The plant most used by patients is moringa, *Moringa oleifera* (61%), followed by nopal, *Opuntia ficus-indica* (11%) garlic, *Allium sativum* (10%). These plants have always been in the indigenous Mayan culture of the study area and not only to control diabetes, but are reported for the control of gastritis, colitis, headaches, clumps, kidney infections, respiratory infections.

Diabetes mellitus, considered a public health problem, requires a comprehensive care model that visualizes this series of sociocultural factors that prevent the prevention, control and treatment of patients that guarantee a better prognosis and quality of life of patients. For the indigenous area in which work was worked, there is much to be done regarding prevention and adherence to drug treatment.

IV. CONCLUTIONS

Among the sociocultural factors identified as elements that influence the diabetic patient's preference for empirical treatment over drug treatment are:

- The economic factor is identified as relevant in decision-making regarding the abandonment of drug treatment, due to the family expenditure that involves monitoring and controlling diabetes mellitus.
- The cultural factor, uses and customs related to empirical-traditional alternative medicine, is closely related to the disappearance of drug treatment discomfort, therefore, the patient chooses alternative treatment.
- The plants most used by patients are: moringa, *Moringa oleifera* (61%), nopal, *Opuntia ficus-indica* (11%) garlic, *Allium sativum* (10%).

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