Factors Relates to a Non Medical Accession by Hipoglycemics Patients with Oral Diabetes Mellitus Type 2

REVIEW

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Abstract

Diabetes mellitus type 2 can be defined as a syndrome of multiple etiologies and currently, it is estimated that in the world exists about 150 million patients with DM, and that number could double until 2025. Non-adherence to treatment is a difficulty in effective assistance to individuals. This study aims to understand the factors related to non-adherence to oral hypoglycemic drug in patients with type 2 mellitus diabetes. It is an integrative review, held in the databases SciELO, PubMed, MEDLINE and LILACS, using the descriptors DeCS (MeSH) - Descriptors in Health Sciences: medication adherence, type 2 diabetes and chronic disease. The selection respected inclusion/exclusion criteria previously listed considering the last six years. 108 articles of which 18 met the criteria were identified. Among the factors that are related to medication accession are: gender, age, education, income, information about the disease and the medication, comorbidities, side effects and the time of diagnosis. It becomes necessary in health education strategies to take into consideration the various personal differences.

Keywords

Diabetes mellitus type 2, Accession, Drugs.

Introduction

Diabetes mellitus type 2 can be defined as a multiple etiology syndrome, by deficient insulin production or insulin ability to properly

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perform its function. Characterized by chronic hyperglycemia with disturbances in the metabolism of lipids and proteins, there is 90% of cases of DM syndrome to be represented by DM 2, usually appearing in adulthood which could bring chronic or acute complications. [1]

Currently, it is estimated that exists in the world about 150 million patients with DM, and that number could double up 2025. [1] Given these alarming figures, we can say that the DM 2 can be considered a pandemic, since the great strike syndrome of the population of all countries, regardless of their level of development [1] These large numbers of cases of DM can result in serious economic and social problems. [1] One of the most important factors is the non-adherence to treatment in DM 2 patients with oral hypoglycemic.

The literature shows the importance of a healthy diet in order to achieve good results in treatment with oral hypoglycemic. You need reeducation and modified eating habits according to the requirements and limitations, since diet is directly linked to blood hyperglycemia. [1]

Non-adherence to treatment is a difficulty in effective assisting individuals, as it requires teamwork, involving health professionals' effort and the use of available technologies, but mainly requires the cooperation and understanding of the patient in self-care. In addition, the identification of influential factors on compliance can help nurses with the stimulus to perform this care. [2] As was seen in the literature, there are many variables that can influence non-adherence, and there is no consensus which has greater influence on membership, among the factors cited: the difficulty of access to medications given to the patient, the patient professional relationship, the therapeutic regimen and the disease. [3]

Second Gimenes, et al, patients often stop taking their medications, or even start treatment by considering them ineffective, or reproduce unpleasant side effects. [3] Noting that one of the issues that influence non-adherence is the low number

of research about therapy with oral hypoglycemic agents, since the mechanisms involved in each individual are different and complex. This, study aims to understand the factors related to non-adherence to oral hypoglycemic drug in patients with type 2 diabetes mellitus given the above it is necessary to further study concerning this subject. [3]

Method

To achieve the objectives of the study it was chosen to an integrative review allowing critical assessment and synthesis of evidence that it is possible to deduce some generalizations from a set of studies previously selected by inclusion and exclusion criteria on research in databases. This study conducted a few steps to the review as: selection of guiding questions to be analyzed, establishing the criteria for inclusion/exclusion previously listed to select the sample, the characteristics of the texts and data analysis, interpretation of results and presentation of the review.

We conducted the search for descriptors in SciELO databases, PubMed, MEDLINE and LILACS, using DeCS (MeSH)-Descritores em Ciências da Saúde (Medical Subject Headings): medication adherence, type 2 diabetes and chronic disease in which was obtained as a result 108 studies. It was established from January publications 2008 to September 2014 with the review taking place in September 2014.

The exclusion of repeated studies was performed excluding 21 studies and remaining 87 items. At first there was a preliminary analysis with the following inclusion criteria be available in full and free of charge (16), published in English, Spanish and Portuguese between the years 2009 to 2014 (23) and considering the subject matter inherent in the theme resulting in the selection of 39 items.

Exclusion criteria were articles that would focus on non-adherence to other therapies (18) and research with patients who had evident ability to compromised decision-making or diagnosed with neurological diseases (3). After you read the titles and abstracts

Figure 1: Flowchart for this study search.

to identify the exclusion criteria highlighted above resulted in 18 studies that have supported the study.

Figure 1 summarizes the methodological procedures adopted in the research.

Results and Discussion

We found 108 studies cited in databases and after application of the inclusion/exclusion criteria were selected 18 studies that make up this review. Some features of the work are summarized in the tables below.

It can be observed that there was a significant increase in studies related to non-adherence to treatment of DM implemented in the last 2 years. This may be a result of the already observed trend of increasing number of people affected by this disease as well as the concurrent resistance to treatment with oral hypoglycemic agents that are associated with multiple factors related both to cultural factors as well as inserted epidemiological.

Although the number of publications have increased, especially in Brazil, there is still need for more studies on the subject. The disclosure of the factors that lead to non-adherence to treatment influences the more objective development of strategies to achieve the objectives which it is proposed by the treatment.

As to the objectives of the studies analyzed, it was found that understanding the factors and perceptions related to the patient and influence on compliance guided most of the items as shown in the following table.

Table 1. Temporal distribution of the analyzed articles.

Period	N (studies)	%
2008 - 2010	7	38.9
2011 - 2012	3	16.7
2013 - 2014	8	44.4
Total	18	100

It can be seen that the objectives of the studies analyzed are composed of some classes of thematic areas and the analysis of the patient's knowledge, co-morbidities, pharmacological complexity and addressing itself strategically and correctly the patient route during treatment. Here, there is once again the importance of knowledge about the influential factors on compliance of the patient by health professionals and can also associate primarily with the nursing profession more etiologically linked to the follow up of various patients and would not differ-

entiate in the case of diabetes. The main factors influencing adherence to treatment of patients with diabetes are summarized in the following table.

The knowledge about how disease is referred to as the leading cause of non-adherence to drug treatment in patients under study. This fact appears to be closely related to the schooling variable, and in some cases the actual literacy of the patient, this at a time associated in most cases with THE age and level of annual income. All this influences the behavior in self-care adopted by patients, since in

Table 2. Distribution of the analyzed studies as the objective of the studies.

Objectives	Number of studies	%
Evaluate the effect of qualification about medication adherence and self-care in adults with type 2 diabetes.	1	5.5
Determine whether health literacy limitations are associated with poor adherence to antidepressant medication among adults with diabetes	1	5.5
To evaluate medication adherence and identify factors that are associated with adherence to treatment in type 2 diabetes mellitus (DM2)	11	61.1
Identifying the knowledge of type 2 diabetic patients	2	11.1
Evaluate the complexity of pharmacotherapy in diabetic patients	2	11.1
To analyze the medical consultations and medicines for the treatment of comorbidities	1	5.5
Total	18	100

Table 3. Factors influencing adherence to treatment in patients with type 2 DM.

Factors for a non-accession	Number of citations of each factor	%
More than 60% are women, the elderly, unmarried and unemployed.	5	10.6
Knowledge about the pathology	11	23.4
Age	3	6.3
Comorbidities	6	12.7
Therapy complexity	5	10.6
Failed the guidance given by health professionals	4	8.5
Educational level	5	10.6
Cultural conceptions	2	4.3
Economic factors	4	8.5
Diagnostic Time	2	4,3
Total	47	100

most cases are responsible for their own care during the treatment period. This fact already indicates the importance that clear guidelines influence in decision making. [4, 5]

The age is related to non-compliance in some cases by considering them with inherent to their own age group factors such as forgetfulness, lack of pathology and treatment. More than half of the population in this factor is over 65 and are women which can also indicate some cultural factor inserted in the results. A large proportion has the diagnosis of pathology to 33 years, though many know only when the elderly that can compromise the understanding and explanation of the disease process. Many patients who fail to adhere to treatment has associated co-morbidities such as obesity, hypertension and dyslipidemia among the most prevalent that can directly influence the mode of action against diabetes primarily with respect to oral hypoglycemic since statistically patients which take more drugs tend not to adhere completely to a kind. [6]

Besides the professional-patient interaction, economic factors and perceptions about the complexity of medication regimens have significant influence on accession. The progress of the disease associated with the development of co-morbidities in turn increases the number of medications to be taken which may discourage administering medications as needed. Moreover, in low-income groups, the cost of medications can be considered a strong influencer of adherence to medication. [7]

One can also make the accession analysis to non-pharmacological treatment in which there are socioeconomic influences, demographic and low income. Besides these features guidelines made by professionals affect motivation for treatment due to information on treatment and pathology, including knowing the type of disease they carry. In some cases, the area of residence also influences this context, since people who live in places with health risk have lower adherence to treatment, which can result as shown in some studies in greater adherence to insulin therapy with oral anti-diabetic. [8, 9]

Associated with these data, almost 60% of patients with diabetes have time under 10 years of diagnosis. Along with this, as already noted, the main associated comorbidities are hypertension, obesity and dyslipidemia and among the chronic complications we highlight retinopathy and heart disease. Despite the low compliance, most patients prefer to adopt drug treatment to physical activity and adhere to adequate food. [10]

The data show that patients over 10 years of diagnostic have better adherence to treatment since this has resulted in an increased knowledge about the disease. But this fact should be considered when related to elderly patients, since in most cases a higher diagnosis time does not bring greater knowledge in this age group. [3]

Another factor that contributes to treatment adherence is confidence in the related staff attitudes adopted as language that is used, respect the existing culture. Also shown relevant the presence of friends and family in the disease process which may result, for example, in not accepting the disease, another factor to consider for noncompliance. Side effects of drug therapy associated with treatment long imposed by the chronic disease, which often can present asymptomatic, and considering the health beliefs which different patients may undergo, are shown as important factors in this process. [1, 2]

Cultural conceptions, and religious perceptions, food and emotional, against diabetes are represented with great difficulty in the treatment process primarily from informal caregivers arising out. This is a fact when associated with the mismatch in various information from health professional staff in relation to popular knowledge and patient generates as a result fatigue and fear against the treatment process, showing up as major deterrent for proper drug therapy. [11]

Drug interactions between drugs used in diabetes and other drugs used, for example, in cases of hypertension, the major comorbidity associated with diabetes, can cause its user to feel uncomfortable

with possible adverse effects, indicating a possible bias to treatment dropout of some pathology often is diabetes for the few signs and symptoms usually felt when compared to hypertension. [12]

Also in this context, more than 50% of cases, most with poor educational and financial condition and almost always present social demographic factors, refer not adhere to a schedule program established for the treatment, but approximately 90% of patients experience feelings of regret when they fail to ingest oral hypoglycemics. [13] This fact can be seen as advantageous over incentive to take medication that can cause this feeling.

Beliefs about the medications used by patients with DM2 are found that there is a close relationship between beliefs about medication and the medication accession itself. Many patients believe in the toxicity and use of excess medication, and other factors as the concern of becoming dependent and do so harm in some way. These facts contribute to the patient feeling unsure of treatment which is being submitted, leaving the edge of treatment dropout. [14]

Moreover, as mentioned above, the majority of patients, regardless the best medical alternative, consider the use of medication more relevant as to have to exercise and diet control, since the use of drugs is considered as treatment of major impact. It was also said that most medication adherence is present in cases where there is need to use multiple doses, emphasizing mandatory reinforcement that makes the treatment to be perceived as it really should be. [15]

Also in this context, the elderly, women, possessed of limited study and family income less than two minimum wages, usually report that the treatment regimen that are imposed is of great complexity. This fact results in a worse glycemic control which in many cases can result in worsening the underlying conditions, such as kidney disease, resulting from a diabetic nephropathy causing further harm to patients. [16]

From the data presented it is observed that among the factors that are related to with medication accession are: gender, age, education, income, information about the disease and the medication, side effects and the time of diagnosis. It can be seen that the greater adherence occurs in patients receiving information on oral hypoglycemic agents and the disease process since attested to the importance of the health professional acquires with the guidelines. Regarding gender women are more likely to develop resistance to treatment because they are more susceptible to stress and emotional problems. In relation to low educational level it could influence the learning in case of complexity of the treatment. [17]

Thus, we can see that the knowledge about the process of treatment in diabetes appears as the great villain especially when associated with comorbidities, low educational level and low income. [18] This fact in most cases could be bypassed with health education programs that would focus on poorer population with regard to the treatment regimen.

Conclusion

The causes that lead patients with type 2 mellitus diabetes to non-adherence to treatment are multifactorial. Because of this it is difficult to develop strategies that address the majority. However it is noted that most of the factors is related to insufficient knowledge about the disease and treatment resulting in fear and sense of venturing into the unknown, exacerbated by the feeling of helplessness.

As said before, it is necessary healthcare education strategies to take into consideration the various personal differences such as age, income, education, motivation and capacity for self-care. The clear and objective patient information provided by health professionals would imply lower rates of non-adherence medication to control diabetes.

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