

WHY EARLY PSYCHOLOGICAL ATTENTION FOR TYPE 2 DIABETICS COULD CONTRIBUTE TO METABOLIC CONTROL

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Abstract

Background and aims: Type 2 Diabetes Mellitus (T2DM) is currently a public health emergency that requires inter- and multidisciplinary medical services. The principal aim of the present work was to review the basic factors related to the possible advantages of providing early psychological attention to T2DM patients as a coadjuvant for achieving adequate metabolic control. *Material and methods:* A literature review was conducted to explore the interaction between stress and depression and the relation of both to the ability of T2DM patients to effectively manage their disease. *Results:* It was found that stress is one of the factors linked to the etiology of depression, which is a disorder with high prevalence in diabetic patients. Consequently, an inter- and multidisciplinary approach to treating diabetic patients was developed. One of the main focuses of this approach is early psychological attention, starting shortly after the initial diagnosis. *Conclusions:* The ability to create consciousness among health care professionals about the importance of early psychological attention for T2DM patients under an inter- and multidisciplinary strategy could possibly improve pharmacological adherence, metabolic control, the quality of life and the life expectancy of patients, as well as save economic resources for patient families and health institutions.

key words: Type 2 Diabetes Mellitus, depression, stress, early psychological attention

Background and aims

Type 2 Diabetes mellitus (T2DM), formerly considered a public health problem, is now a worldwide pandemic. According to the International Diabetes Federation, approximately 415 million people currently suffer from diabetes worldwide, a figure likely to increase to 642 million by 2040 [1].

Although T2DM is clearly a metabolic disorder, it also has psychological consequences that may affect the management of the disease. In 2010, there were an estimated 298 million cases of major depressive disorder worldwide, a condition ranked as the second leading cause of disability-adjusted life years [2,3]. There are several reasons why this common psychological disorder could be exacerbated by diabetes and as a result affect adherence to treatment as well as

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several physiological factors. In addition to the effects of depression itself, depressed people encounter a heightened risk of falling into or remaining in poverty as a result of reduced productivity, the loss of their job, the stigma attached to depression, and greater expenditures on health care [4].

It has been estimated that diabetic patients have at least twice the risk of depression or anxiety as the general population [7,8], the latter with a risk of 28-35% [9,10]. Although the chronicity of diabetes creates the conditions for a higher risk of depressive disorders [11,12], depressive disorders frequently go unnoticed [5] because family doctors and general practitioners do not undergo extensive training in recognizing their signs and symptoms [6]. Diverse levels of depression have been found in T2DM patients due to the emotional stress associated with the diagnosis of diabetes [13] and the long-term process of living with the disease. The stress over the long run stems in part from changes in food and exercise habits to control glycemia as well as associated complications [12].

Stress is not only an emotional reaction, but also involves a combination of neuroendocrine, immunological and behavioral processes and responses. All of these factors participate in an exaggerated adaptive response of the organism, which may be perceived as a threat or danger, whether the basis is biological or psychological [14]. Thus, diabetic patients face a double burden, experiencing stress from everyday life and from the disease. The disease factors include the chronicity of the disorder, the uncertainty of having adequate metabolic control through medical treatment, the demand for self-care, and diminished physical/corporal function [15-17].

Interaction of stress and depression in T2DM

This combination of stress factors could generate the response of a series of mechanisms

for diabetic patients, such as the activation of the hypothalamic-pituitary-adrenal (HPA) axis to maintain homeostasis [14]. Over time, the depletion of the organism because of the allostatic load depends on the magnitude of stress as well as its interaction with internal characteristics of the patient (e.g., the metabolic and genetic profile) [18,19].

Two recent studies have provided insights into the association between stress, depression; allostatic load and diabetes. First, diabetic individuals reported more symptoms of depression and greater stress than did healthy controls [20]. Secondly, reduced stress responsivity in T2DM is, in part, due to the impairment of stress-induced changes in mineralocorticoid and glucocorticoid sensitivity [21]. Consequently, both contributions strengthen the hypothesis that the deregulation of the HPA axis is a key biological link between stress, depression and diabetes [22].

It is worrisome that depression and anxiety can negatively affect adherence to the lifestyle and medication required for a healthy adaptation to T2DM [23]. Diabetic patients typically live sedentary lives, smoke and consume high-fat diets, all of which undermine the quality of life [23] and represent risk factors for inadequate metabolic control of the disorder [24-26]. Although the requirement of changes in these aspects of an unhealthy lifestyle may lead to anxiety and depression, early diagnosis, psychological treatment and follow-up may be able to relieve the suffering of T2DM patients, and thus favor better metabolic control of the disorder. In such a case, an additional advantage would be the conservation of economic resources of the corresponding family and health care institution [26,27].

The basis of early psychological attention in diabetic patients

As can be appreciated, novel strategies are needed to confront the effects of T2DM. The implementation of a new approach involving an integral management of the disease is particularly difficult to carry out, given the current exponential increase in the disorder and the insufficiency of public resources to deal with this situation [28]. Nevertheless, there is a need for an integral approach to avoid isolated strategies by distinct health care professionals.

For example, a previous study created psychological intervention at an advanced stage of T2DM, when the patient had already developed kidney failure [29]. It would be preferable to create and develop early strategies to overcome the main barriers that impede adherence to treatment and improvement in quality of life. The early delivery of psychological care for patients with T2DM could help overcome the well-reported barriers to effective treatment typically identified by doctors [30].

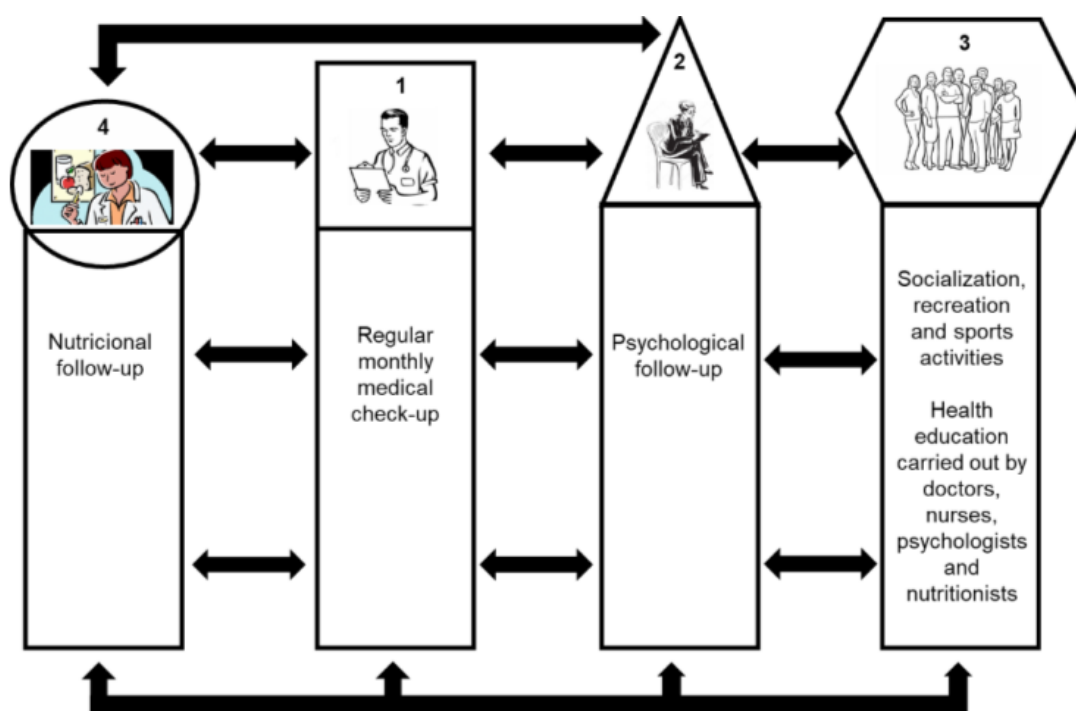


Figure 1. Scheme representing the implementation of early psychological attention with an inter- and multidisciplinary approach for attention to diabetic patients. 1 = Initial medical diagnosis; 2 = exchange of patient diagnosis between doctors and psychologists; 3 = diabetics club; 4 = nutrition department. The arrows indicate the continual and progressive communication between the distinct health care professionals.

Hence, we presently suggest a strategy based on early psychological counseling, beginning soon after the diagnosis of T2DM has been made. The doctors treating T2DM patients should engage in a professional exchange with the psychology department, enabling the psychologists to evaluate possible depression and related disorders in diabetic patients (Figure 1), which in turn would enable the

development of strategies for handling stress in such a way as to diminish the allostatic load [31,32].

It can be recommended to diabetic patients that they join a club created in the respective health institution. The purpose of the club would be for diabetic patients to be able to develop social, recreational and sports activities, thus providing forums that lend themselves to an

exchange between patients. The patients with a greater level of consciousness about self-care could have a positive influence on the other patients in regard to metabolic control of the disease [33,34]. These activities would also provide opportunities for the implementation of institutional strategies for health education. The various health care professionals involved in the treatment of this disorder, including nutritionists, psychologists, nurses and doctors, would be able to work together to educate diabetics to adhere to effective treatment. Overall, these activities and strategies should certainly have a positive impact on the understanding of diabetic patients about their condition and the importance of putting recommendations into practice, such as psychological strategies for dealing with stress and improving adherence to pharmacological treatment.

Needless to say, the intervention of a psychologist must be closely coordinated with the corresponding doctor and nutritionist. One strategy would be to use clinical files as a means for these three areas of health care professionals to make and share notes about the progress and problems encountered during the integral

treatment of the patients. It is indispensable to develop an inter- and multidisciplinary approach from the initial stage of diagnosis, with the aim of encouraging patients to exercise metabolic control of the disease and therefore avoid the early appearance of complications.

Conclusions

It is necessary to heighten the consciousness of distinct health care professionals about the benefits of early psychological attention to diabetic patients as part of an inter- and multidisciplinary approach to encourage metabolic control of the disorder. Not only could such an approach improve the health of patients, their quality of life and their life expectancy, but it would also tend to make health care more efficient for these patients and therefore less costly for the respective family and health care institution.

Conflicts of interest. The authors have no conflicts of interests regarding this paper.

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