Challenges and strategies of health care for diabetics in the context of Covid-19

Desafios e estratégias de atenção à saúde de diabéticos no contexto da Covid-19

Desafíos y estrategias de atención a la Salud para pacientes diabéticos durante la pandemia de Covid-19

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RESUMO

Objetivo: apresentar os desafios e estratégias de cuidado ao paciente diabético em serviços especializados frente à pandemia por Covid- 19. **Método:** Estudo de reflexão teórica sobre os desafios e estratégias do cuidado ao paciente diabético frente à pandemia. Tais reflexões surgem a partir de leituras sobre a temática, tendo como eixos orientadores, os postulados teóricos sobre o Covid-19 e o cuidado especializado ao paciente diabético, além das nossas vivências pessoais e profissionais. **Resultados:** Pacientes diabéticos não parecem apresentar risco aumentado de se contaminar pelo Covid-19, todavia, uma vez infectado, tem mais chances de evoluir para forma mais grave e maior risco de morte. O bom controle glicêmico pode diminuir o risco de complicações nesse grupo. Assegurar o cuidado ao paciente diabético, com exposição mínima aos serviços de saúde, tem sido um dos grandes desafios das unidades de saúde, que precisaram implementar estratégias, tais como alterações no fluxo de atendimento, triagem de risco para todos os pacientes, redução das consultas presenciais, uso obrigatório de máscara, confecção de cartilhas informativas, orientações remotas e sobre monitoramento dos níveis glicêmicos, dispensação de medicamentos sob agendamento, dentre outros. **Conclusão:** A complexidade da pandemia pela Covid-19 e as medidas de distanciamento social trouxeram desafios no cuidado ao paciente diabético, que variam desde a repercussão do isolamento no cotidiano desses indivíduos, a necessidade de alterações na rotina dos serviços, além da exposição e condições de trabalho dos profissionais de saúde.
Descritores: Atenção à saúde; Covid-19; Fatores de risco; Diabetes Mellitus.

ABSTRACT

Objective: to present the challenges and strategies of care for diabetic patients in specialized services in the face of the Covid- 19 pandemic. **Method:** Study of theoretical reflection on the challenges and strategies of care for diabetic patients in the face of the pandemic. Such reflections arise from readings on the theme, having as guiding axes, the theoretical postulates about Covid-19 and specialized care for diabetic patients, in addition to our personal and professional experiences. **Results:** Diabetic patients do not seem to have an increased risk of becoming infected with Covid-19, however, once infected, they are more likely to evolve to a more severe form and greater risk of death. Good glycemic control can decrease the risk of complications in this group. Ensuring the care of diabetic patients, with minimal exposure to health services, has been one of the great challenges of health units, which needed to implement strategies, such as changes in the flow of care, risk screening for all patients, reduced consultations face-to-face, mandatory use of a mask, preparation of information booklets, remote guidance and monitoring of blood glucose levels, dispensing medications on schedule, among others. **Conclusion:** The complexity of the Covid-19 pandemic and the measures of social distance brought challenges in the care of diabetic patients, ranging from the repercussion of isolation in the daily lives of these individuals, the need for changes in the routine of services, in addition to exposure and conditions of health professionals.
Descriptors: Health Care; Covid-19; Risk factors; Diabetes Mellitus.

RESUMEN

Objetivo: Presentar los desafíos y estrategias de atención médica para pacientes diabéticos en servicios especializados durante la pandemia de Covid-19. **Método:** Este es un estudio de reflexión teórica sobre los desafíos y estrategias de atención médica para pacientes diabéticos, basado en la literatura científica. Los ejes rectores del estudio fueron postulados teóricos sobre Covid-19 y atención especializada para pacientes diabéticos, además de experiencias personales y profesionales. **Resultados:** Los pacientes diabéticos no parecen tener un mayor riesgo de contaminación por Covid-19. Sin embargo, si están infectados, pueden progresar severamente y morir. Por lo tanto, un buen control glucémico puede disminuir el riesgo de complicaciones. Garantizar la atención del paciente con una exposición mínima a los servicios ha sido un desafío para las unidades de atención médica, que han implementado cambios en el flujo de atención y en la detección de riesgos, con reducción de las consultas presenciales, uso obligatorio de máscaras, elaboración de folletos, orientación remota y dispensación programada de medicamentos. **Conclusión:** La complejidad de la pandemia de Covid-19 y las medidas de distanciamiento social trajeron desafíos para la atención médica de los pacientes diabéticos, que van desde la repercusión del aislamiento en la vida cotidiana de los pacientes y los cambios en los servicios hasta el cuidado de la exposición y las condiciones laborales de los profesionales de salud.
Descriptores: Atención a la Salud; Covid-19; Factores de riesgo; Diabetes mellitus.

Introduction

Covid-19 had its first cases registered in the Chinese province of Wuhan on December 31, 2019, being declared a pandemic and international public health emergency by the World Health Organization in March 2020, following the exponential increase in cases in several countries in the world.[1] From this epidemiological context, which culminated in restrictive measures of social isolation, leaving traces of death and infected by Covid-19 in all countries, it became a serious public health problem because it was associated with high morbidity and mortality and transmissibility of the virus, spreading rapidly and overwhelmingly, overloading health and funeral services.

Currently, the number of infected people worldwide already exceeds 7 million, in addition to having been registered, until June 19, 2020, around 434,970 thousand deaths from complications of the disease.[2] In Brazil, the first confirmed case occurred on February 26, 2020 in the State of São Paulo and the first death on March 17, 2020 in the same state.[3]

Brazil occupies the second position in number of confirmed cases (1,033,156) and in number of deaths (48,954), with a lethality rate of 4.7% registered until June 19, 2020. The age group with the highest number of deaths between 60 and 79 years old (58%), with heart diseases (7,318) and diabetes (5,627) being the main affected comorbidities.[2]

Contextualizing, Covid-19 is an emerging acute respiratory infectious disease, transmitted mainly by the respiratory tract, by droplets of secretions and by direct contact between people and contaminated surfaces.[4] The clinical picture of the disease is similar to that of other respiratory viruses, with symptoms of fever, generally dry cough, tiredness and, in more severe cases (5%), dyspnea, pulmonary bleeding, severe lymphopenia and renal failure. In 80% of cases, symptoms are mild. The diagnosis of symptomatic cases must be confirmed with the virus search by nasal swab polymerase chain reaction (PCR).[5]

The most serious cases of the disease have been recorded in older patients who have some type of comorbidity, especially respiratory, cardiac, hypertension and diabetes.[6-7] Thus, this association with other comorbidities makes the younger population with these conditions also a risk group.[1]

Although the overall mortality rate for Covid-19 is low (1.4-2.3%), patients with comorbidities are more likely to have serious complications from the disease and subsequent mortality.[8] Lethality rates vary among affected countries depending on factors that may contribute to both the number of deaths and confirmed cases, such as the proportion of the population at risk in the population (number of elderly and / or people with chronic diseases), accessibility to health services and availability of diagnostic tests, as well as resources to deal with serious and critical cases.[9]

Thus, in the midst of the progressive growth of cases and deaths from the new coronavirus in Brazil and worldwide, patients with comorbidities hitherto unknown and / or untreated or even not properly controlled, including diabetes, hypertension, obesity, tuberculosis, cardiovascular disease, cancer, asthma, immunosuppression, among others, have overburdened health systems, due to the increased risk of worsening the patient's clinical condition which, in most cases, requires intensive care in specialized units.[1]

In this context, among the main comorbidities that lead to death in patients infected with Covid-19, Diabetes Mellitus occupies the second position, with 5,627 registered deaths, until June 14, 2020, behind only cardiovascular diseases, such as heart disease, with a record of 7,318 deaths by the same date.[2]

Regarding the pathophysiological mechanism of the disease, the coronavirus binds to target cells through the angiotensin-2 converting enzyme (ACE-2) and its expression is increased in people who manage their diabetes with ACE inhibitors and anti-hyperglycemic receptors of type I angiotensin II[10], making these patients more susceptible to complications[11], such as respiratory distress syndrome and multiple organ failure. This association reinforces the need to intensify continuous metabolic control of the disease, with remote consultations to reduce exposure, in addition to the adoption of protective measures to prevent contamination by the disease, such as hand washing and social distance.[12-13]

Continuous glucose monitoring (CGM) and glucose flash systems are useful and allow remote monitoring by healthcare providers. Routine clinic visits and overcrowding in hospitals must be minimized to reduce the spread of disease among people with diabetes. It is also important that people with diabetes have an adequate supply of their medicines at home.[14]

In addition to the pathophysiological factors, it is emphasized that the high rate of DM in Brazil is largely related to the lifestyles adopted by the population, as well as the influence of social determinants and socio-economic and cultural factors. As it is a chronic disease with the possibility of worsening associated with Covid-19 infection, it is important to adopt procedures for adequate and continuous control of the disease, such as the practice of regular physical activities, increased frequency of measurement of capillary blood glucose , hydration, balanced and healthy diet, pharmacological treatment with oral hypoglycemic agents and insulin, monitoring by the endocrinologist.

Regarding to the health services, establishments must be prepared to detect suspected or confirmed virus infection patients early, in order to adopt control measures that prevent its spread, being able to use visual alerts, at the entrance and in places strategic services.[15] In addition, infection prevention and control measures must be followed by professionals to avoid or reduce the transmission of microorganisms as much as possible during any procedure, and must be implemented before the patient arrives at the health service, either by telephone. , at the reception, screening, waiting for assistance or during the assistance provided.[16-17]

In view of this situation, there is an urgent need to reflect on the challenges and strategies of care for diabetic patients that can assist health services in the context of the Covid-19 pandemic. Therefore, the objective of this article is to present the main challenges and strategies for the care of diabetic patients in specialized services in the face of the pandemic by Covid-19.

Method

This is a narrative review developed from articles published in journals and documents from official agencies. This methodology allows to describe the state of the art, in order to condense the knowledge already exposed in the literature plus the reflections proposed by the authors. This method contributes to the discussion on a theme, being indicated for themes that need further study, as well as Covid-19.

After reading the publications, we proceeded to analyze and reflect on the topics covered in the articles, in relation to the scientific aspects, challenges and support strategies for patients and families used by health services in the face of the pandemic by Covid-19.

Results and Discussion

Diabetes in the Covid-19 pandemic scenario

It is understood that Diabetes Mellitus is considered a comorbidity that, like others, such as hypertension, obesity, among others, worsens the clinical outcomes of patients affected by Covid-19.

Studies show that pathogens can express conditional virulence - meaning that they can be highly virulent in some people and less in others, depending on the characteristics of the guest, such as age, presence of other infections and the immune system response of each one.[18]

DM involves elevating proven glycemic indexes from fasting glycemia greater than 100mg / dL or glycated hemoglobin (HbA1c) below 7, according to the Brazilian Diabetes Society.[17]

Peric and Stulnig (2020) state that the patient with diabetes is predisposed to a severe course of Covid-19, probably due to an unregulated immune response, doubling the risk of mortality due to pulmonary and cardiac impairment. Notably, patients with diabetes had higher serum inflammatory markers, more pronounced computed tomography (CT) imaging pathologies, indicating global pathologies and particularly pulmonary involvement, in addition to a disposition to a hypercoagulable state. Consequently, diabetes was significantly associated with the development of acute respiratory distress syndrome (ARDS).

It should be noted that the biological plausibility of the association between diabetes and the severe form of Covid-19 is not fully understood. However, some authors raise the hypothesis that the use of drugs in the treatment of diabetes and hypertension may be related to mechanisms of worsening of the SARS-Cov-2 infection, which causes Covid-19.[19]

Some studies describe the pathophysiological mechanism associated with the worsening of SARS-Cov-2 infection, highlighting the participation of the Angiotensin-2 converting enzyme (ECA2) in endothelial cells, which is present in organs such as the heart, kidneys and lungs, being the main responsible for the entrance of Covid-19 in the cells of the infected person, resulting from the activation of glycoproteins and the cleavage of ECA3 by proteases. Thus, the positive regulation of this enzyme occurs in patients with cardiovascular diseases, diabetes and hypertension, who use drugs as ACE2

inhibitors and blockers of type I angiotensin II receptors, helping to exponentially increase infected cells and speed up evolution of Covid-19 in this population.[8]

However, there is no clinical evidence to confirm this association, and it is not recommended to suspend these drugs in the treatment of these comorbidities by scientific societies such as the Brazilian Diabetes Society itself.[20]

In view of this context, there is an urgent need for the adoption of adequate protocols in institutions that provide assistance to diabetic patients, in order to guide and monitor the strict control of glycemia, with a view to improving clinical outcomes, especially the mortality rate, when infected. Covid-19, in addition to the social isolation recommended by health authorities. Good glycemic control in this group will also contribute to the prevention of cardiovascular complications when exposed to high blood glucose levels.

The pandemic scenario has enabled feelings of uncertainty, fear in the entire population, especially in chronic patients due to the potential for aggravation when exposed by the virus.[14,21] Some symptoms such as depression, anxiety, sleep disorders, among others can be noticed. The appearance of these psychological symptoms can cause a favorable scenario for the instability of the physiological mechanisms of the organism, bringing consequences such as the increase in blood pressure, the increase in blood glucose levels and the increase in the occurrence of asthmatic crises, which aggravates the situation of those who already have chronic diseases.

Therefore, it is important to ensure psychological well-being, as stress can adversely affect glycemic control. Keeping in touch with relatives, friends and neighbors through telephone conversations or using online communication platforms can help to reduce the effects of isolation. In addition, relaxation techniques, such as meditation, can help people with stress and anxiety.[17]

The break in the pace of life, imposed by social distance and quarantine practices can have an impact on the clinical management of patients with chronic diseases, such as the issue of changes in insulin sensitivity in diabetic individuals as a result of low adherence to physical activity, sudden changes in social routine, eating habits and little food diversity.[10]

The study is limited by the context that, in view of incipient studies, does not allow advances in discussions about the association of diabetes and the worsening of Covid-19 infection, which can affect both healthy individuals or those with comorbidities. At this point, new reflections on the association of Covid-19 with chronic diseases are important, or even with the development of other diseases arising after recovery from this infection.

Challenges and care strategies for health services during the Covid-19 pandemic

The Covid-19 pandemic affected the form of organization of health services for the treatment of patients with diabetes, causing significant changes in the health system and interruption of best service delivery practices, leaving a large number of patients without healthcare.[11] Thus, specialized centers and care networks in primary health care had to adapt to the new reality, in order to continue promoting the surveillance and control of diseases of groups vulnerable to infection by Covid-19, avoiding the collapse of the care network.

Faced with this changing scenario, aiming at the need to guarantee safety in patient care, the integrity of the companions, visitors and service workers were essential changes in the dynamics in the Specialized Care Centers. Among them, the reorientation in the flow of people and companions in the physical structure of the environment stands out, as well as the use of mandatory mask, prohibition of companions with flu-like symptoms and the projection of large, ventilated waiting rooms with an appropriate distance between users.[16]

In this regard, the Ministry of Health (MS) published COVID-19 clinical management protocols with guidelines for the assistance and monitoring of this risk group. Primary Health Care (PHC) was inserted in this scenario with some objectives, such as meeting the cases considered mild, from the Reception with Risk Classification (ACCR), stabilizing and forwarding the most serious cases of Covid-19, in addition to monitor confirmed cases, ensuring recommended social isolation and clinical discharge of cases. In this way, it is possible to speed up the service within the unit itself or the referral to a service of greater complexity.

Faced with the challenges imposed by the disease, hospitals and specialized centers, in response to the guidelines for social distance, sought alternatives in order to minimize the potential spread of the disease, without interrupting the continuity of the provision of care services to patients and adapting the reality of each person. Therefore, it was necessary to comply with sanitary recommendations, such as the use of masks for the general population, reinforcement of hygiene care, use of personal protective equipment and a reduced number of visits, in order to guarantee the surveillance and control of disease, which makes this population even more vulnerable.

Considering the diverse impacts for people with chronic diseases, some actions were designed by the Brazilian government in order to minimize the spread of the disease in the country, such as the extension of the validity of prescriptions for drugs of continuous use for six months, reducing travel to the cities. units for this purpose. Many health institutions have prepared an educational booklet and folders with guidelines on disease prevention and control and basic care during this period[11], in addition to risk screening protocols for patients seen during the pandemic; scheduled flows of consultations and medication dispensing, among others.

In light of these circumstances, most forms of technology have been permitted by jurisdictions in order to support the largest number of patients, so that telephone calls have become an accepted modality for conducting a clinical visit. For those living with diabetes, this is an opportunity to be able to access care with greater convenience, without having to expose themselves to infection in a personal clinic.[10,17]

Other measures such as consultations through telemedicine or telephone counseling, purchase and sending of medicines by caregivers or family members, online coordination of the distribution of medicines and dispensing them for prolonged periods should be considered by health managers. Routine non-emergency assessments should be postponed, as close contact between healthcare professionals and patients can lead to an increased risk of transmission by Covid-19. Patients with high-risk limb or vision complications should be screened urgently.[14]

The actions of direct care to patients that involve the work of professionals, can be enhanced with the training of teams, especially nursing,

which have, in essence, health education actions, aiming at reducing their contamination during the work activities.

In Brazil, there has been an increase in the number of infected and deaths of health professionals who are at the forefront in coping with the pandemic by Covid-19, creating a climate of apprehension, fear, anxiety, stress and insecurity in these professionals, especially in those with comorbidities, such as hypertension, diabetes, obesity, among other diseases, due to the increased risk of suffering serious complications resulting from Covid-19 infection.[7]

Thus, it is essential to adopt intensive care and safety measures during direct care for suspected patients for Covid-19, such as the use of personal protective equipment (N95 or FFP2 mask, cloak, gloves, eye protection and apron)), which is not a reality commonly observed in many Brazilian municipalities that record the scarcity of these materials in hospitals and emergency care units, often generating improvisation in the use of these essential products for their safety. In addition, health professionals with DM and other chronic diseases involved in coping with Covid-19 need to have adequate and frequent control of the disease, in order to avoid worsening the clinical condition in case of coronavirus infection or even be removed from the line of treatment. ahead of work activities.

Considering the need for changes in the preparation of health care teams for the proper management of patients suspected and / or confirmed by Covid-19, health professionals underwent technical training on clinical management, dressing and removing PPE. The reduction in the distribution of PPE is one of the main factors that cause fear and insecurity in health professionals, especially nurses and nursing technicians, because in addition to seeking alternatives to protect themselves against the shortage of PPE, they should also be attentive to minimize risks to patients and companions within inpatient units.[22]

Thus, the public health emergency situation declared worldwide, brought to light some aspects to be rethought: unhealthy work situations, deficit of professionals and shortage of materials, low adherence to protocols and recommendations involving patient safety, negligence on the part of managers in guaranteeing better working conditions and ensuring quality care for the assisted population.[23]

In view of the need for social isolation of health professionals diagnosed with Covid-19, the number of health workers in specialized centers needed to be renewed, which contributed to the Ministry of Health hiring, on an emergency basis, new health professionals. health, mainly to work in field hospitals, built temporarily to supply the demand for new beds.

Despite the measures already adopted by health authorities to face Covid-19, it is necessary to discuss the challenges of health services at different levels of care in order to understand how this dynamic is happening to guarantee assistance to groups risk management and driving to reduce disease morbidity and mortality.

Conclusion

In view of the public health emergency scenario declared with the pandemic by Covid-19 and concerns about the worsening situations of people with chronic non-communicable diseases (NCDs), reflections on the challenges and care strategies with this vulnerable group are highlighted infection.

The current situation presents many obstacles for the population, which requires the implementation of self-care actions and compliance with health recommendations aimed at individual and collective protection, which aim to contribute to reducing the likelihood of the disease reaching the risk groups.

It is hoped that the contributions proposed in this article may collaborate to expand the sensitive view of care for chronic patients, as a risk group, and thus ensure specific care actions and appropriate and timely clinical management aimed at this vulnerable population.

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