The importance of educating older adults with diabetes

Kristina Rakuša Krašovec

University of Novo mesto, Faculty of Health Sciences Novo mesto, Novo mesto, Slovenia

kristina.rakusa-krasovec@uni-nm.si

Abstract

Introduction: Diabetes is a chronic non-communicable disease of modern times. At the same time, one can almost speak of a pandemic, because type 2 diabetes is one of the leading diseases of modern times. It affects adults after the age of 40, and the cause of its morbidity is mainly inappropriate lifestyle. Therefore, it is extremely important here to properly educate both the older and younger generation so that they know how to prevent themselves. *Method:* The research is quantitative and based on descriptive and causal non-experimental method of work. The data for the analysis of the empirical work was obtained using a survey technique, which was processed and graphically displayed on a computer. The study included 90 patients treated for diabetes in Celje General Hospital. *Results:* Research has shown that diabetic patients are receptive to new information and knowledge as they are aware that this is the only way they can maintain their health as optimal as possible. They are aware that their health depends on following all the medical advice they receive from the medical staff with whom they are very satisfied. It was noted that it is the medical personnel who are concerned about supporting and motivating the diabetic patients and their relatives. *Discussion and conclusion:* The term training means education and to train diabetic patients properly, the medical staff must have a wide range of knowledge. Adequate training is extremely important in maintaining and preventing the deterioration of health of a patient with diabetes. Diabetic patients are usually elderly people who are often unaware of how severe the disease is and how important they themselves are in preventing the development of chronic complications from the disease. It is important that they cooperate and be involved in the treatment process itself, which will be even more successful with the right education.

Keywords: diabetes, training, health education, patient

Introduction

Diabetes mellitus is a chronic metabolic disease characterized by hyperglycemia due to disturbances in the secretion and/or function of insulin, resulting in disturbances in the function of carbohydrates, fats, and proteins (Ryden et al., 2007). There are different types of diabetes: type 1, type 2, gestational diabetes (Khan et al., 2019), secondary type of diabetes, hybrid types of diabetes and unclassified types (World Health Organization, 2019). Diabetes can be termed as a non-communicable epidemic. The number of diabetics is increasing rapidly, especially type 2 diabetics. In the treatment of diabetics, medical education is of great importance. Its aim is to enable the patient to control his own disease, to take over self-control and thus prevent the complications of inadequately treated diabetes. Type 2 diabetes is primarily a disease of older adults, as it usually occurs after the age of 40. It occurs after the age of 40. It accounts for 90-95% of all diabetes cases, although unfortunately it is also more common in young people, especially in developed countries (Weale et al., 2019). Sokolov (2012) explains that in this type of diabetes, the pancreas produces insulin, but in small amounts, or the body has developed a resistance to it. It occurs quite inconspicuously, as patients often do not become ill until they already have chronic complications due to the disease or find out during a random examination. Risk factors for a person to develop this type of diabetes are: Age, obesity, physical inactivity, hypertension and dyslipidemia, hereditary predisposition, and women with gestational diabetes during pregnancy (American diabetes..., 2013; Mrevlje, 2005).

Education is part of general education and a basic task of nurses (Dolinar, 2016; Janjoš et al., 2012). The patient must actively participate in the treatment process, for which he must be properly informed, motivated and educated if he is to be able to properly manage his disease (Janjoš et al., 2012; Poljanec Bohnec, 2016). Education involves a multidisciplinary team whose goal is to achieve the highest possible quality of life and prevent exacerbation of the disease (Poljanec Bohnec, 2016). Most patients are overweight, have elevated triglycerides and often hypertension (Tomažin Šporar, 2012), so they need to learn to measure and control blood glucose and blood pressure and adjust therapy accordingly (Pandit et al., 2014). In this way, they increase their autonomy, prevent glycaemia and consequent complications (Grégoire and Philis, 2017; Volčanšek and Zaletel, 2016). Since many diabetics suffer from depression, it is important to prevent this (Kaučič, 2020).

Methods

The aim of the study was to determine the awareness of type 2 diabetics about their health status, the adequacy of health education provided by medical staff and the motivation of patients to accept new information. The research was based on a quantitative working method. For the purpose of the empirical work, primary and secondary sources were collected, analyzed and synthesized. Primary data for the analysis was obtained using a survey tech-

nique. For the theoretical part, technical and scientific literature was used, which was obtained from international databases. For the purpose of the study, an open and closed-ended questionnaire was prepared based on a review of foreign and domestic literature. The first part of the questionnaire was dedicated to demographic data, while the second part was related to the research questions.

The research was conducted in the General Hospital of Celje. It included 83 patients. The survey was conducted in January and February 2020 in a diabetic clinic. Consent was obtained from the General Hospital of Celje. Participation in the survey was voluntary and anonymous. The collected data were analyzed computerized using Microsoft Office Excel and presented in the results. Ethical principles of research were followed at all stages of data collection and processing.

Results

Majority of the respondents were above 61 years old, 62 (75 %), 11 (13 %) were between 51 and 60 years old and 10 (12 %) were between 31 and 50 years old and participated in the survey.

Most of the respondents do not have normal body weight but are overweight. Only 17% of the respondents have normal diet. Regarding diabetes management, 50% need tablets, 37% need diet and 13 % already need insulin. The majority of respondents say they are aware of their disease, 51 %. The same percentage say they have received most of the information about their disease from medical staff. Our respondents are highly motivated for health education, as many as 79 % of them, the rest are not motivated. 83 % of them answer that there is enough health education material about their disease. Majority of the respondents (66 %) also answered that medical staff provides adequate support in managing diabetes. When we determined how many patients perform blood glucose self-monitoring, we found a high percentage (86 %). When determining the normal fasting blood glucose, 82 % responded that this value is less than 6.0 mmol / l. When asked what problems occur with diabetes, there were several possible answers. That it is visual disturbances, answered 86%, 80% answered that the sensitivity of the feet to touch decreases, 64 % indicated vascular problems, 45 % decreased concentration, 37 % difficulty urinating, 21 % decreased appetite, 18 % memory loss, 2 % reported thirst and fatigue. In terms of causes of hypoglycaemia, where multiple responses were possible, 75 % reported that the most common cause was inadequate food intake, 65 % agreed that this was due to overdose of insulin or tablets, 20 % reported alcohol consumption and 14 % could not answer this question. What changes the respondents look out for when observing their feet, 91% answered that it was sore feet, 66 % swollen feet, 65 % nail changes, 46 % blisters, 43 % dry skin, 7 % answered I don't know. Majority of the respondents answered that they are satisfied with the type of training provided in the diabetic clinic, 74 % of them.

Discussion

We find that majority of the respondents are well aware about their disease and are motivated to participate in the treatment in which they are actively involved. The educational work of the medical staff and their attitude towards patient education also plays an important role. The majority of participants rate this as good, they are satisfied with the work of the medical staff. However, there are obstacles in absorbing information, as the majority of respondents do not have a university degree, which leads to difficulties in understanding new information. Most of the respondents are over 61 years old, which is an additional barrier to receiving information. Problems can arise when medical professionals use terminology that is not understandable to most patients.

According to Starc (2003), the purpose of health education for diabetics is to change behavior, which would enable the patient to have the best possible quality of life despite diabetes. Teaching a patient about his or her illness is crucial to the course of a chronic illness and is an important part of treatment. The role of providers of health education content is counseling, learning, practical demonstration, testing of knowledge and motivating patients and relatives to achieve the best self-management of the disease (Curhalek, 2013). In modern times, patients are increasingly educated and informed due to the availability of information and also the desire for permanent education. Therefore, health education is becoming increasingly complex and demanding, which means that health professionals must also be properly educated and must upgrade their knowledge (Sajko and Ertl, 2009). Gjuran (2011) states that motivation is a key psychological function. The learning itself must be adapted to the patient and also to the health professional, his abilities and environment, and above all it is important that it is easy for the patient (Žerdoner, 2016). Today's approach in health education focuses on the patient, in his active role, that they know how to take care of their own health and prevention (Koprivnikar, 2008). A diagnosis of diabetes can have very negative psychological consequences for the patient and his relatives, so the proper health education is of utmost importance. When a patient gains care for his illness, his self-confidence and life optimism also grow (Vrtovec, 1999).

Conclusion

Diabetes is a major health problem in the developed world. The number of newly diagnosed patients with diabetes is increasing rapidly, so it is extremely important to raise public awareness about the risk factors that can lead to the onset of diabetes and the appropriate prevention. For patients with diabetes who already have the disease, it is important to provide consistent tertiary health education so that patients know how to manage their own disease, live with their disease, and prevent it from getting worse. It is very important that patients know how to prevent the occurrence of acute and chronic complications of diabetes.

References

- AMERICAN DIABETES ASSOCIATION, 2013. Diagnosis and Classification of Diabetes Mellitus [online]. *Diabetes Care*, vol. 36, no. 1, pp. 67-74. [viewed 15 June 2021]. Available from: https://care.diabetesjournals.org/content/diacare/36/Supplement_1/S67.full.pdf
- CURHALEK, V., 2013. Pasti pri posredovanju informacij in zdravstvenovzgojnih vsebin bolniku. In: FILEJ, B., eds. *Celostna obravnava pacienta – Kako daleč smo?* Novo mesto: Fakulteta za zdravstvene vede Novo mesto, pp. 89-97.
- DOLINAR, Š., 2016. Predlog modela edukacije za sladkorno bolezen. In: PEKLAJ, K., eds. *Endokrinološki kongres zdravstvene nege*. Ljubljana: Zbornica zdravstvene in babiške nege, pp. 11-12.
- GJURAN, J., 2011. Motivacija pacientov s sladkorno boleznijo za sodelovanje pri zdravstveni obravnavi: diploma thesis. Maribor: Univerza v Mariboru, Fakulteta za zdravstvene vede, pp. 19.
- GRÉGOIRE, J. and PHILIS, M. G., 2017. L'éducation nutritionnelle du patient diabétique [The nutritional education of patients with diabetes] [online]. *Soins; la revue de reference infirmiere*, vol. 62, no. 815, pp. 19-23 [viewed 16 June 2021]. Available from: <https://doi.org/10.1016/j.soin.2017.03.006>
- JANJOŠ, T., KLAVS, J., KOSMLINA NOVAK, V., PETERNEJ, K., PEKLAJ, K., POLJANEC BOHNEC, M., SLAK, M., STRNAD, S., TOMAŽIN ŠPORAR, M. and ŽARGAJ, B., 2012. Kurikulum za edukacijo o oskrbi odraslih bolnikov s sladkorno boleznijo. Ljubljana: Zbornica zdravstvene in babiške nege Slovenije –Zveza strokovnih društev medicinskih sester, babic in zdravstvenih tehnikov Slovenije, Sekcija medicinskih sester in zdravstvenih tehnikov v endokrinologiji.
- KAUČIČ, M., 2020. Težave in počutje bolnikov s sladkorno boleznijo tipa 2: master's thesis [online]. Maribor: Univerza v Mariboru, Fakulteta za zdravstvene vede, pp. 2. [viewed 21 June 2021]. Available from: <https://dk.um.si/Dokument.php?id=147355>
- KHAN, R., CHUA, Z., TAN, J. C., YANG, Y., LIAO, Z., and ZHAO, Y., 2019. From Pre-Diabetes to Diabetes: Diagnosis, Treatments and Translational Research [online]. *Medicina (Kaunas, Lithuania)*, vol 55, no. 9, pp. 546 [viewed 15 June 2021]. Available from: <https://doi.org/10.3390/medicina55090546>
- KOPRIVNIKAR, H., 2008. Vzgoja za zdravje za otroke in mladostnike v primarnem zdravstvu. Ljubljana: Inštitut za varovanje zdravja Republike Slovenije, pp. 8.
- MREVLJE, F., 2005. Bolezni presnove. In: KOCJANČIČ, A., MREVLJE, F. and ŠTAJER, D., eds. *Interna medicina*. Ljubljana: Založba Littera Picta, d. o. o., pp. 682-716.

- PANDIT, A.U., BAILEY, S.C., CURTIS, L.M., SELIGMAN, H.K., DAVIS, T.C., PARKER, R.M., SCHILLINGER, D., DEWALT, D., FLEMING, D., MOHR, D.C. et al., 2014. Disease-related distress, self-care and clinical outcomes among low-income patients with diabetes [online]. *Journal of Epidemiology and Community Health*, vol. 68, no. 6, pp. 557–564. [viewed 22 June 2021]. Available from: <https://pubmed.ncbi.nlm.nih.gov/24489044/>
- POLJANEC BOHNEC, M., 2016. Edukacija o telesni dejavnosti in kakovost življenja starejših bolnikov s sladkorno boleznijo: master's thesis [online]. Ljubljana: Univerza v Ljubljani, Pedagoška fakulteta, pp. 1. [viewed 14 June 2021]. Available from: <https://repozitorij.uni-lj.si/IzpisGradiva.php?id=85972>
- RYDÉN, L., STANDL, E., BARTNIK, M., VAN DEN BERGHE, G., BETTERIDGE, J., DE BOER, M.J., COSENTINO, F., JÖNSSON, B., LAAKSO, M., MALMBERG, K. et al., 2007. Guidelines on diabetes, pre-diabetes, and cardiovascular diseases: executive summary. The Task Force on Diabetes and Cardiovascular Diseases of the European Society of Cardiology (ESC) and of the European Association for the Study of Diabetes (EASD) [online]. *European Heart Journal*, vol. 28, no. 1, pp. 88–136. [viewed 22 June 2021]. Available from: <https://academic.oup.com/eurheartj/article/28/1/88/2887245>
- SAJKO, G. in ERTL, M., 2009. Pomen medicinskih sester. *ISIS*, vol. 18, no. 5, pp. 40.
- SOKOLOV, V., 2012. Naravno zdravljenje: diabetes. Ljubljana: Begen, pp. 13.
- STARC, A., 2003. Program zdravstvenega izobraževanja sladkornih bolnikov. *Obzornik zdravstvene nege*, vol. 37, no. 3, pp. 139–150.
- TOMAŽIN ŠPORAR, M., 2012. Štetje ogljikovih hidratov. In: TOMAŽIN ŠPORAR, M. and POLJANEC BOHANEK, M., eds. *Kurikulum za edukacijo o oskrbi odraslih bolnikov s sladkorno boleznijo*. Ljubljana: Zbornica zdravstvene in babiške nege Slovenije, pp. 28–30.
- VOLČANŠEK, Š. and ZALETEL, J., 2016. Spremljanje urejenosti glikemije v ambulantni obravnavi. In: ZALETEL, J. and RAVNIK OBLAK, M., eds. *Slovenske smernice za klinično obravnavno sladkorne bolezni tipa 2*. Ljubljana: Diabetološko združenje Slovenije, pp. 53–58.
- VRTOVEC, M., 1999. Zdravstvena vzgoja bolnikov s sladkorno boleznijo tipa 2. In: KOSELJ, M., MEDVEŠČEK, M. and MREVLJE, F., eds. *Sladkorna bolezen tipa 2, Priročnik za zdravnike*. Ljubljana: Samozaložba, pp. 348–357.
- WEALE, C.J., DAVISON, G.M., HON, G.M., KENGNE, A.P., ERASMUS, R.T. and MATSHA, T.E., 2019. Leucocyte Telomere Length and Glucose Tolerance Status in Mixed-Ancestry South Africans. *Cells*, vol. 18, no. 5, pp. 464.

- WORLD HEALTH ORGANIZATION, 2019. Classification of Diabetes mellitus [online]. [viewed 15 June 2021]. Available from: file:///C:/Users/KRKRAS~1/AppData/Local/Temp/9789241515702-eng.pdf
- ŽERDONER, L., 2016. Zdravstvena vzgoja bolnikov s KOPB. In: PRESTOR, L., eds. Zbornik predavanj z recenzijo. Strokovni seminar Astma in kronična obstruktivna bolezen, Zreče, 8.–9. april 2016. Ljubljana: Zbornica zdravstvene in babiške nege Slovenija –Zveza društev medicinskih sester, babic in zdravstvenih tehnikov Slovenije, pp. 61–66.