СИСТЕМА ЗДРАВООХРАНЕНИЯ И СОВРЕМЕННОЕ ЛЕЧЕНИЕ ДИАБЕТА 2 ТИПА В УЗБЕКИСТАНЕ

А.Ж.Каюмов.

Ферганский медицинский институт общественного здоровья.

Аннотация: Распространенность сахарного диабета (СД) растет из-за урбанизации, старения населения, роста численности населения, отсутствия физической активности и избыточной массы тела. Лечение сахарного диабета является важной проблемой для Узбекистана как с медицинской, так и с социально-экономической точек зрения в связи с ростом числа больных сахарным диабетом 2 типа (СД-2Т), приводящим к инвалидности и преждевременной смертности. Целью данного исследования является подведение итогов текущего состояния лечения диабета в Узбекистане и анализ текущего лечения диабета в Ферганской области.

Ключевые слова: *сахарный диабет 2 типа, распространенность, лечение.*

O‘ZBEKISTONDA SOG‘LIQNI SAQLASH TIZIMI VA 2-TOIFA QANDLI DIABETNI ZAMONAVIY DAVOLASH

A.J.Kayumov

Farg‘ona jamoat salomatligi tibbiyot instituti.

Annotatsiya: Qandli diabetning (QD) tarqalishi urbanizatsiya, aholining qarishi, aholining o‘sishi, jismoniy harakatsizlik va ortiqcha tana vazni tufayli ortib bormoqda. 2-tu rtoifa qandli diabet (2T-QD) bilan kasallangan bemorlar soni ortib borayotganligi sababli, nogironlik va erta o‘limga olib keladigan diabet kasalligini davolash O‘zbekiston uchun ham tibbiy, ham ijtimoiy-iqtisodiy nuqtai nazardan muhim muammo hisoblanadi. Ushbu tadqiqotning maqsadi O‘zbekistonda qandli diabetni davolashning hozirgi holatini umumlashtirish va Farg‘ona viloyatida qandli diabetni davolashning hozirgi holatini tahlil qilishdan iborat.

Kalit so‘zlar: *2-toifa qandli diabet, tarqalishi, davolash.*

HEALTHCARE SYSTEM AND CURRENT TREATMENT OF TYPE 2 DIABETES IN UZBEKISTAN

Kayumov J.A.

Fergana Medical Institute of Public Health.

Annotation: Diabetes mellitus (DM) is increasing because of urbanization, aging, growth in population, physical inactivity, and excess body weight. The management of diabetes is an important issue for Uzbekistan both from medical and socio-economic points of view due to the increase in the number of patients with type 2 diabetes (T2DM), resulting in disability and premature mortality. This study aims to summarize the recent status of diabetes care in Uzbekistan and to analyze the current treatment of diabetes in the Fergana region.

Keywords: *premature rupture of membranes (PROM), atrazine test strips, probiotics.*

Introduction: Uzbekistan is one of the Central Asian countries and is classified as a developing country with a low-middle income level.1 The population of Uzbekistan was 33.6 million in 2019. Uzbekistan's poverty level has been improving, and its gross domestic product was now 57.9 billion USD in 2019 [1]. The life expectancy has been increasing and was 71.4 years in 2019. Morbidity and mortality patterns have been changing from communicable diseases to non-communicable diseases (NCDs) like other developing countries. In 2018, coronary heart disease (41.7%) was the leading cause of death, followed by stroke (10.8%), hypertension (6.8%), and liver disease (4.4%)[1,2]. DM was the 5th cause of death (3.6%).2 IDF reported that 1.2 million people (6.5%) in Uzbekistan were estimated to have DM in 2018, and undiagnosed DM comprised 52.7% of them. The proportion of diabetes-related deaths in people under 60 years was 33.3%. Total diabetes-related health expenditure was estimated to be 395 million USD in 2019.3 The management of DM is an important issue for Uzbekistan both from medical and economic points of view due to the increase in the number of patients with T2DM [3,4,5]. Studies on DM and healthcare systems for DM in Uzbekistan are limited so far. This study aims to overview healthcare for DM in Uzbekistan and to reveal the most updated treatment patterns of T 2DM in the Fergana region [6].

Materials and methods: To describe the current healthcare for DM in Uzbekistan, "Clinical recommendations for treatment type 2 diabetes", published in 2019,4 reports from international organizations5 and research papers6-9were used. Every year, the National Registry of Diabetes by the Republican Specialized Scientific-Practical Medical Center of Endocrinology (RSSPMCE) under the Ministry of Health of the Republic of Uzbekistan (MOHR) collects data on DM patients from all public health facilities in Uzbekistan. In this study, we used the data on DM patients from annual surveillance collected in the Fergana region in January 2019, including 19 central multi-specialty outpatient polyclinics [7,8,9]. The data were collected retrospectively from the medical records of the patients who had ever visited those polyclinics from 1st January to 31st December 2018. Demographic and clinical characteristics, including residency, age, gender, body mass index (BMI), blood pressure, complications, duration of DM treatment, and medications were used for this study. A total of 25,402 outpatients were registered.

Patients with type 1 diabetes mellitus (T1DM), gestational diabetes, and those with missing variables were excluded. The number of enrolled patients with T2DM was 22,991 in this study.

Results: The National Registry of Diabetes was launched in 2000 by RSSPMCE under MOHR. It started with the registration of children and adolescents with T1DM and has extended the coverage to all patients with DM since 2007. The registry includes demographic data, disease duration, treatments, biochemical parameters, degree of compensation, the presence of late vascular complications, date, causes of death, and the status of disability. For data entry, the electronic data registry system on personal computers is used. The registration system made the data entry easier than the paper-based surveillance used before. The national registry enabled to collection and analysis of the data of epidemiology, diagnosis, and treatment, as well as it brought the benefits of assessing the needs for drugs and medical devices. It allowed RSSPMCE to solve the clinical and epidemiological issues on one registry. The registered data are reported to MOHR of the Republic of Uzbekistan. In 2018, a total of 230,610 patients with diabetes, composed of 18,349 T1DM and 212,261 T2DM, were registered in the National Registry of Diabetes [10,11].

Healthcare on DM is provided to patients without out-of-pocket money in public health facilities. The Republic of Uzbekistan established and enforced the law called "Medical Assistance in medical organizations of MOHR at the Expense of the State Budget of the Republic of Uzbekistan" in 2017. The law defines the diseases and types of healthcare that are covered by the State budget of the Republic of Uzbekistan. Diseases with significant impacts on society are included in this scheme. All types of DM are categorized as diseases that the state budget covers. A total of 22,991 patients (10,246 males and 12,745 females) with T2DM in the Fergana region, who had ever visited the polyclinics in 2018, were enrolled in the National Registry of Diabetes and analyzed (Table 1). The mean age of the patients was 60.41±8.96 years, with a range of 29 to 88 years. The majority (75.8%) of the patients were aged 51–70 years, 11.6% were aged more than 70 years, and only 1.9% were aged under 41 years. Most of the patients lived in rural areas (70.3%). Overweight (BMI, 25.0–29.9 kg/m2) patients comprised 53.1%, and 33.0% were obese (BMI ≥ 30.0 kg/m2). Only 13.7% had normal weight (BMI, 18.5–24.9 kg/m2).

High blood pressure was found in 47.5% of the patients. Monotherapy was the most common medication for T2DM (71.0%), followed by dual combination therapy of two anti-diabetic drugs (28.1%). Only 0.9% of the patients were treated without medications. Among monotherapy of T2DM, insulin (25.3%) was the most common medication, followed by BG (23.4%), SU (20.8%), and TZD (1.5%). The combination therapy of two anti-diabetic medications was BG+SU (24.5%), insulin+BG (2.7%), and insulin+SU (0.9%). Diabetic neuropathy (23.0%) was the most prevalent comorbidity, followed by diabetic retinopathy (6.9%), and diabetic nephropathy (4.2%). The mean duration of T2DM was 6.43 ± 5.12 years. The duration of T2DM in 50.7% of the patients was less than 6 years, 43.3% had a duration of 6–15 years, and 6.1% had T2DM for more than 15 years. In the age group of less than 40 years, BG was the most prescribed medicine (32.1%), followed by insulin (21.3%) and BG+SU (21.1%). The same tendency was found in the age group of 41–50 and 51–60 years. Insulin was the most prescribed medicine in the age group of 61–70 and more than 70 years. BG monotherapy decreased as the age increased. In the duration group of less than 6 years, BG was the most prescribed medicine (38.4%), followed by SU (20.7%). All patients who did not receive any medications belonged to this group. In the duration group of 6–10 and 11–15 years, insulin and BG+SU were the most prescribed medicines. Compared with the duration group of less than 6 years, monotherapy of oral drugs, including BG and SU decreased, and insulin monotherapy and combined therapy with insulin+BG and BG+SU increased. In the duration group of more than 15 years, the most prescribed medicine was insulin (54.7%).

Conclusion: The Republic of Uzbekistan is now focusing on NCDs including DM. The roles of health facilities are well defined at each level, but the conduction of examinations seems insufficient. Overweight and obesity are highly prevalent in the Fergana region of Uzbekistan. Insulin monotherapy, BG, SU, and BG+SU were the most common medications. Insulin monotherapy was the most common in the older age groups and patients with a longer duration of DM. Policymakers have to strengthen the healthcare of DM with multifaceted approaches, including screening for DM in the larger population, examining patients with DM to diagnose complications, and raising awareness among the public and medical professionals.

REFERENCES:

1. Alikhanova N, Akbarov Z, Ismailov S. Epidemiological aspects of diabetes mellitus in Tashkent based on register data. Int J Endocrinol. 2016;2(74):111-114. doi:10.22141/2224-0721.2.74.2016.70948

2. Alikhanova N, Ismailov S, Akbarov Z. Results of the state diabetes mellitus register in Bukhara, Navoi, Khorezm regions, and the Republic of Karakalpakstan. Int J Endocrinol. 2016;3(75):39-42. doi:10.22141/2224-0721.3.75.2016.76629.

3. Alimov AV, Haydarova FA, Rakhimova GN, et al; Clinical Recommendations for Treatment Type 2 Diabetes. (In Uzbek) Tashkent: Ministry of Health; 2019.

4. Alieva AV, Ismailov SI, Rahimova GN. Epidemiology of diabetes and prediabetes in Uzbekistan: screening results. Health Sci J. 2018;12(6):609. doi:10.21767/1791-809x.1000609.

5. Akhunbaev, O. A., & Mamasaliev, N. S. (2022). The influence of anemia on the course of cardiovascular diseases. Economy and Society, (6-2 (97)), 329-332.

6. Ahmedov M, Azimov R, Mutalova Z, et al. Uzbekistan: Health System Review. Health Syst Transit. 2014;16(5):1-137.

7. International Diabetes Federation. Belgium: Uzbekistan Diabetes Report 2010-2045. Brussels: IDF; 2019. https://www.diabetesatlas.org/data/en/country/214/uz.html. May 31, 2020.

8. Government of Uzbekistan. National Program on Improving Endocrinological Assistance to the Population of the Republic, 2019-2021. Tashkent: Government of Uzbekistan; 2019.

9. The World Bank. Uzbekistan: An Overview of the World Bank's Work in Uzbekistan. Washington: The World Bank; 2020. https://www.worldbank.org/en/country/uzbekistan/overview. Accessed May 31, 2020.

10. World Life Expectancy. USA: Health Profile Uzbekistan. Sacromento: World Life Expectancy; 2018. https://www.worldlifeexpectancy.com/country-health-profile/uzbekistan. Accessed June 22, 2020.

11. World Health Organization. Regional Office for the Western Pacific: Case-Based Payment Systems for Hospital Funding in Asia: an Investigation of Current Status and Future Directions. Geneva; WHO; 2015.https://apps.who.int/iris/handle/10665/208246. Accessed May 28, 2020.

Информация об авторах:
© КАЮМОВ Ж.А.- Ассистент кафедры Госпитальной терапии Ферганского медицинского института общественного здоровья. г.Фергана. Узбекистан.

Muallif haqida ma'lumot:
© KAYUMOV J.A.- Farg'ona jamoat salomatligi tibbiyot instituti, Gospital terapiya kafedrasi assistetnti. Farg'ona sh. O'zbekiston.

Information about the authors:
© KAYUMOV J.A.- Assistant Department of Hospital Therapy, Fergana Medical Institute of Public Health. Fergana, Uzbekistan.