

Results of 2023 Screening of the Risk of Type 2 Diabetes in Navai Residents

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Abstract: The progressive increase in the prevalence of type 2 diabetes mellitus (T2DM) and an even more rapid increase in the number of people with early forms of carbohydrate metabolism disorders (impaired glucose tolerance and impaired fasting glycemia) necessitate a paradigm shift: a transition from diagnosing diabetes based on visiting a doctor if present. complaints about existing diabetes, to work to actively identify people at high risk of developing it and implement effective preventive measures among them.

Keywords: type 2 diabetes mellitus, screening, risk factors, impaired glucose tolerance, impaired fasting glucose, prevention.

Introduction. Diabetes mellitus (DM) is a group of metabolic diseases characterized by chronic hyperglycemia, which results from impaired insulin secretion, insulin action, or both. Chronic hyperglycemia in diabetes is accompanied by damage, dysfunction and failure of various organs, especially the eyes, kidneys, nerves, heart and blood vessels. The global diabetes epidemic currently represents a major public health problem. WHO and the International Diabetes Federation (IDF) emphasize that most of the increase in the number of people with diabetes is happening in parts of the world where the necessary care is not available at the required level. In low- and middle-income countries and regions, where so many people suffer from chronic health problems, identifying, treating and preventing them is a high priority for health systems. The main risk factors for the development of diabetes II in most people are dietary habits associated with the consumption of large amounts of high-calorie and easily digestible food and drinks, physical inertia or hypokinesia, increased body weight or obesity, everyday household and work activities associated with a high risk of psycho-emotional stress. Also of no small importance are the widespread prevalence of bad habits, such as smoking and drinking alcohol, the uncontrolled use of drugs of synthetic origin, especially the abuse of hormonal drugs and antibiotics.

Thus, given the speed of development of scientific and technological progress, which influences both professional activities and living conditions, almost every person is at risk of developing diabetes mellitus II modern theories of diabetogenesis. All the main pathogenetic mechanisms for the development of diabetes II include IR, secretory defect of β -cells and hyperproduction of glucose by the liver. The level of glycemia is influenced by numerous factors that determine the functional activity and the amount of glucose released into the blood during the day. Daily glucose fluctuations, i.e. circadian regulation of glycemic homeostasis is determined by the degree of physical activity, eating habits, state of the psychoemotional sphere, etc. The development of diabetogenesis is also facilitated by an increase in the tone of the sympathetic section of the ANS, increasing the so-called contrainsular effect of hormones [13].

Target– assess the degree of risk of developing T2DM in residents of Navai in the next 10 years. Achieving this goal was associated with solving the following tasks: identifying risk groups for developing this disease in the next 10 years; identify the most significant factors within the high-risk group; determine a set of preventive measures to reduce the risk of T2DM.

Material and methods. The material for the study was data from screening of the adult population of Navai, conducted as part of the “Say No to Diabetes!” campaign. Venue: RNPTSE Navainsky branch. Everyone took part in the screening, regardless of gender, the presence or absence of concomitant somatic pathology. All screened individuals were included in the study. The representative sample was formed from 290 people: 210 women and 80 men. None of the subjects had a previous diagnosis of diabetes mellitus. Screening was carried out on the basis of a questionnaire with the calculation of the FINDRISK scale. Data was processed and analyzed using computer programs Excel 2013 (Microsoft) and Statistica 6.0. The type of sample distribution was assessed using the Kolmogorov–Smirnov test; the studied indicators were presented in the form $M \pm m$. Research methods: collection of anamnestic data, assessment of physical status (height, weight, BMI, waist and hip circumference, blood pressure level), measurement of blood glucose levels (glucometer).

Research results. 44.1% of those screened have a low risk, 13.2% have a moderate risk, and 42.7% have a high risk of developing T2DM. Presumably, subjects at high risk already have T2DM. In most cases, subjects with a high risk of developing T2DM did not suspect they had the disease and had never previously consulted an endocrinologist. During the study, risk factors were analyzed and ranked by frequency of occurrence. It was found that in the high-risk group, visceral obesity prevails in prevalence (incidence rate – 98.4%). The second most common factor is the age factor – 94% of cases. This is followed by arterial hypertension and a history of drug antihypertensive therapy - 80%, overweight and obesity - in 75%. In the group with a low risk of developing T2DM, the incidence of the studied indicators was: visceral obesity - 39%, age over 45 years - 53.1%, history of drug antihypertensive therapy - 23.4%, obesity - 18.8%. The following in the rank of importance are: lack of regular physical activity - in 74% of cases, hereditary predisposition - in almost 69%. The least significant in this group was poor nutrition – in 42% of cases.

Conclusions. More than 40% of Voronezh residents have a high risk of developing T2DM. At the same time, most of the significant risk factors are modifiable and can be corrected using preventive measures, which include the following: – informing the population about diabetes, its complications and the role of early detection of carbohydrate metabolism disorders; – identification of the target population (with a high level of risk of developing T2DM) by introducing the FINDRISK questionnaire into the work of general practitioners and therapists in Navai; – verification of metabolic disorders in high-risk groups; – correction of modifiable risk factors (hypertension, obesity, physical inactivity, poor nutrition); – monitoring the results of preventive measures among people with carbohydrate metabolism disorders.

References:

1. Ismoilov JA, Egamberdiyeva YK kizi, Mahmamoradova NN, Daminov AT. TIME-RESTRICTED NUTRITION AS A NEW STRATEGY FOR THE THERAPY OF OBESITY AND COMORBID CONDITIONS. *Educational Research in Universal Sciences*. 2024;3(4 SPECIAL):660-667.
2. Takhirovich DA, Nasimova D, Xushvaqtova B, Aliyeva N, Mirabror B. QUALITY OF MEDICAL CARE PROVIDED TO CHILDREN WITH TYPE 1 DIABETES MELLITUS. *PEDAGOG*. 2024;7(3):16-22.
3. Xoldorov X, Omonov F, Jumayev I, Daminov AT. TYPE 1 DIABETES AS A RISK FACTOR FOR BONE HEALTH IN CHILDHOOD. *Results of National Scientific Research International Journal*. 2023;2(8):131-135.
4. Daminov AT, Xurramova S, Islomov A, Ulashev M, Ikramov R, Mirzakhakimov P. Type 2 diabetes and bone mineral density in postmenopausal women. *Science and Education*. 2023;4(11).

5. Berkinov A, Safarov F, Tursunova S, Daminov AT. VITAMIN D STATUS IN SENIOR RESIDENTS OF SAMARKAND REGION. *Results of National Scientific Research International Journal*. 2023;2(8):136-140.
6. Taxirovich DA, Ulugbekovna RN, Abduxalimova YJ. STATUS AND PROSPECTS FOR THE FIGHT AGAINST DIABETES MELLITUS. *Educational Research in Universal Sciences*. 2024;3(1):4-9.
7. Davranova A. QALQONSIMON BEZ PATOLOGIYASI BO'LGAN O'SMIR QIZLARDA HAYZ DAVRINING BUZILISHINI O'ZIGA XOSLIGI. *Евразийский журнал медицинских и естественных наук*. 2022;2(8):113-115.
8. Хамраев Х, Содиков С, Хамраева Д, Собирова Д. Клинико-функциональное состояние печени у больных с сахарным диабетом. *ЖПБМ*. 2018;(1 (99)):189-191.
9. Содиков С, Каримова Н, Каримова З. Реабилитация больных пожилого возраста сахарным диабетом 2-типа. *ЖПБМ*. 2017;(4 (97)):105-106.
10. Хамидова МН, Исматова ИФ, Бердиев ЖШ, Негматова ГШ, Даминов АТ. САХАРНЫЙ ДИАБЕТ И COVID-19. *Eurasian Journal of Medical and Natural Sciences*. 2022;2(13):190-204.
11. Шухратовна СД, Кахрамонович ЮУ, Махмудович КТ. Структурные изменения сосудисто-стромального комплекса щитовидной железы при эутиреоидной и токсических формах зоба. *Научный журнал*. 2019;(10 (44)):67-69.
12. Собиржонова КН, Саллохидинович СС, Акбаровна ОМ. Эпидемиологический Статус И Факторы Риска Сахарного Диабета На Сегодняшний День. *Miasto Przyszłości*. 2023;32:212-219.
13. Salimova DE, Daminov AT. A CLINICAL CASE BASED ON THE EXPERIENCE OF TREATING HYPERTENSION IN A PATIENT WITH TYPE 2 DIABETES MELLITUS, OBESITY AND VITAMIN D DEFICIENCY. *Educational Research in Universal Sciences*. 2023;2(12):150-154.
14. Takhirovič DA. ASSESSMENT OF HEARING FUNCTION IN INDIVIDUALS WITH TYPE 2 DIABETES. *American Journal of Pediatric Medicine and Health Sciences (2993-2149)*. 2023;1(9):124-126.
15. Qahramonov FA, Amirov BY, Tursunboyeva LI, Daminov AT. Autoimmun tireoidit bilan kasallangan bemorlardagi funksional buzilishlarning differensial diagnostikasida qalqonsimon bez zichligini aniqlash. *Science and Education*. 2023;4(3):82-86.
16. Nazira K, Siddikovna TG, Davranovna DA, Takhirovič DA, Tulkinovich OS. Cardiovascular complications in patients who have had covid on the background of diabetes mellitus 2. *1*. 2021;2(3):37-41.
17. Choriyev S, Gadoeva Z, Mardonova F, Jurakulov F, Hafizov S, Daminov AT. Changes in the thyroid gland in the long period after a new coronavirus infection. *Science and Education*. 2023;4(12):102-106.
18. Kamalov T, Bahriev N, Yuldashev U, Sabirova D. CLINICAL AND HORMONAL CHARACTERISTICS OF PRIMARY HYPOGONADISM IN PRESCHOOL BOYS. *MedFarm*. 2019;10(9). doi:10.32743/2658-4093.2019.9.10.188
19. Daminov AT, Yuldoshev B, Murodullo I, Naimova N. CLINICAL CASE OF PRIMARY HYPOTHYROIDISM. *Educational Research in Universal Sciences*. 2024;3(3 SPECIAL):135-138.
20. Daminov AT, Norkulov A, Turamudov R, Zayniddinova D. CLINICAL OBSERVATION OF SEVERE ITSENKO-CUSHING DISEASE. *Educational Research in Universal Sciences*. 2024;3(4 SPECIAL):549-556.
21. Daminov A, Khaydarov O, Hasanova M, Abdulkahorova R. COMPLICATIONS OF GLUCOCORTICOID THERAPY IN PATIENTS DIABETES SURVIVED COVID-19.

- Евразийский журнал медицинских и естественных наук.* 2023;3(4):197-200.
22. Takhirovich DA, Corners SJA, Shukhratovna NG, Shukhratovna SG, Zaynuddinovna MG. COURSE OF COVID-19 IN PATIENTS WITH DIABETES MELLITUS. *Web of Scientist: International Scientific Research Journal.* 2022;3(02):73-76. doi:10.17605/OSF.IO/B6FU2
 23. Shukhratovna NG, Erkinovna SD, Suxrobovna XM, Ikromovna AZ. DIABETES MELLITUS, ISCHEMIC HEART DISEASE AND ARTERIAL HYPERTENSION. *PEDAGOG.* 2022;5(5):381-386.
 24. O'g'li SOS, O'g'li RSO, Taxirovich DA. DIFFUZ TOKSIK BUQOQ. *Лучшие интеллектуальные исследования.* 2023;4(1):131-133.
 25. Negmatova GS, Toshimova GT qizi, Abdiyev LS o'g'li, Daminov AT. EFFECTIVENESS OF CORRECTION OF DYSLIPIDEMIA IN ELDERLY PATIENTS WITH TYPE 2 DIABETES MELLITUS. *Educational Research in Universal Sciences.* 2024;3(1 SPECIAL):269-274.
 26. G.Sh N, D.e S, Oybekovma XS, Qamariddinovna XA, O'g'li BJA. ENDOCRINE GLANDS, STRUCTURE, AGE FEATURES, FUNCTIONS. *PEDAGOG.* 2022;5(5):341-345.
 27. Sobirjonovna KN. FACTORS DETERMINING THE CLINICAL SIGNIFICANCE OF DEPIPTIDYL PEPTIDASE 4 INHIBITORS IN THE TREATMENT OF PATIENTS WITH TYPE 2 DIABETES MELLITUS. *World Bulletin of Public Health.* 2022;8:67-72.
 28. Ismoilov JA, Egamberdiyeva YK kizi, Mahmamuradova NN, Daminov AT. FAMILY FORM OF NEPHROGENIC X-LINKED DIABETES INSUPLIUS. *Educational Research in Universal Sciences.* 2024;3(4 SPECIAL):703-710.
 29. Daminov AT, Djabbarova D, Abduvohidova N, Furkatova D, Farxodova S, Ibragimova P. Features of bone tissue remodeling in patients with type 2 diabetes mellitus. *Science and Education.* 2023;4(11).
 30. Daminov Abdurasul Takhirovich RSU. FEATURES OF THE CLINIC, REHABILITATION, TREATMENT OF AUTOIMMUNE THYROIDITIS IN THE CONDITIONS OF THE IODINE-DEFICIENCY REGION. Published online April 12, 2023. doi:10.5281/ZENODO.7820412
 31. Shuhratovna NG, Shukhratovna SD. Features of the course of autoimmune hepatitis in children as a variant of autoimmune polyglandular syndrome. *Asia Journ of Multidimensi Resear (AJMR).* 2020;9(7):89. doi:10.5958/2278-4853.2020.00228.1
 32. Erkinovna SD. Features of the Course of Diabetes Mellitus Type 2 with Arterial Hypertension. *JournalNX.* Published online 2020:460-461.
 33. Negmatova GS, Xakimova GD qizi, Abdiyev LS o'g'li, Daminov AT. FEATURES OF THE RULES FOR INSULIN INJECTION TECHNIQUES IN ELDERLY AND SENILE PATIENTS WITH DIABETES MELLITUS. *Educational Research in Universal Sciences.* 2024;3(1 SPECIAL):259-264.
 34. Takhirovich DA, Zafarovna KM, Isroilovna IS. FEATURES OF TYPE 1 DIABETES IN CHILDREN WHO HAVE COVID-19. *American Journal of Pediatric Medicine and Health Sciences (2993-2149).* 2023;1(9):121-123.