ISSN: 3032-1085

INFLUENCE OF TYPE 2 DIABETES ON THE FUNCTION OF THE CENTRAL NERVOUS SYSTEM

Scientific adviser: Djuraeva Zilola Aramovna
Assistant of the Department of Endocrinology, Samarkand State Medical University

Boltayeva Muxlisa

student of medical course 410 group, Samarkand State Medical University

Elliyeva Elnura

student of medical course 410 group, Samarkand State Medical University

Choriyev Ramziddin

student of medical course 410 group, Samarkand State Medical University

Received: Dec 15, 2023; Accepted: Jan 16, 2024; Published: Feb 14, 2024;

Abstract: Diabetes mellitus (DM) is a global health problem that affects all age groups, races and ethnicities[1,3,4]. Currently, about 177 million people worldwide suffer from this disease[33,34]. According to WHO forecast, the number of patients with diabetes will increase to 300 million people by 2025[2,5,6]. Non-insulin-dependent diabetes mellitus (NIDDM) is the most common and accounts for about 90% of diabetes cases[7,8,9].

Keywords: Perception, Practice, Pap smear test, Human papilloma virus, Cervical cancer.

INTRODUCTION

This is due to the aging population in developed countries and the increasing incidence of obesity. Prevention of complications specific to NIDDM is key to reducing morbidity and mortality associated with diabetes[10,11]. In recent years, it has been shown that complications of diabetes are often diagnosed before the initial diagnosis of the disease itself, since 50% of cases of all patients have damage to other organs and tissues[30,31,32,35]. If diabetes is not detected or treated adequately, this inevitably leads to the occurrence of microvascular complications and an increase in the number of hospitalizations associated not only with diabetes, but also with the treatment of its complications[12-15]. One of the most common microvascular complications of diabetes, causing mortality and mortality in patients, is diabetic neuropathy (DN), which (according to a summary analysis of epidemiological studies) occurs in approximately 30% of cases in hospital patients and in 20% of outpatients[16-19]. The main risk

factor for the development of diabetic neuropathy is decompensation of diabetes[28,29]. The DCCT study demonstrated that achieving compensation for diabetes from the onset of the disease reduces the risk of developing DN by 69%, and ensuring its compensation at any stage of the disease reduces the risk of developing DN by 57%[20,21,22,23]. Thus, along with an unfavorable prognosis and an increase in the number of patients with diabetes in the world, we should also expect a proportional increase in the prevalence of its microvascular complications, including: DN, which makes the health problem we are considering extremely relevant[24,25,26].

TARGET. To assess peripheral nerve damage in patients with diabetes mellitus (DM) and identify differencesin the speed of reaction and perception depending on age groups, duration of type 2 diabetes (T2DM), levels of fasting plasma glucose and glycated hemoglobin (HbA1c), and compare them with those in healthy people.

MATERIALS AND METHODS. The study was conducted at the Samarkand branch of the Republican Scientific and Practical Center of Endocrinology. A total of 60 patients diagnosed with T2DM were included in the study.

and 60 healthy controls. A finger-tapping test, visual and auditory response tests were carried out, respectively. Fasting plasma glucose and HbA1c levels were recorded, and duration ofdiseases. The analysis of the obtained data was carried out using SPSS version 25. Differences were considered statistically significant at a p value <0.05.

RESULTS. It was noted that control group participants aged 18 to 34 years showed fasterreaction in all tests (p=0.01), but differences in reaction speed in both groups decreased with increasing age. Positive correlations were revealed between the duration of T2DM and the results of visual and auditory tests (r=0.69, p<0.05; r=0.52, p<0.05, respectively). There was also a positive correlation between the level of HbA 1c (%) and the results of the visual reaction test (r=0.97, p<0.05).

CONCLUSION. As glycated hemoglobin levels increased and the duration of type 2 diabetes increased, patients' reaction speed and perceptual skills decreased. There was a rapid decline in cognitive function, especially in the early stages. The most correct prevention is to achieve target levels of glycemia and glycated hemoglobin.

References

1. Sobirjonovna, Kurbonova Nozima. "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 8 (2022): 67-72.

2. Muratova N. Y., Khasanov I. I., Yusupov S. S. Применение ультразвуковой кавитации при лечении гнойных ран челюстно-лицевой области //Здобутки клінічної і експериментальної медицини. – №. 1.

3. Джураева З.А., Насруллаева У.Ф. Эффективность и безопасность комбинированной сахароснижающей терапии в лечении больных сахарным диабетом 2 типа. Достижения науки и образования. №9 (63)-2020. стр 74-76.

4. Karimova N.A., Kurbanova N.S. Disorders of physical development in adolescents and its complications // Journal of Cardiorespiratory Research. - 2021. - Vol. 2. - No. 2.

5. Karimova N.A., Kurbanova N.S. Disorders of physical development in adolescents and its complications // Journal of Cardiorespiratory Research. - 2021. - Vol. 2. - No. 2.

6. Sobirjonovna K. N. 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. Т. 8. – С. 67-72.

7. Курбонова Н.С. Негматова Г.Ш. “Ортиқча вазнли қизларда хайз даврининг бузулиши”// Тиббиѐтда янги кун. 9(47) 287-291 бет. 2022

8. Курбонова Н.С. Негматова Г.Ш. "Эриктильная дисфункция у больных сахарным диабетом и ее клинический анализ"//Биомедицина ва амалиѐт 5.1 сон. 160-165 бет. 2022 йил.

9. Курбонова Н.С. "Clinical manifestations and classification of lesions of the macular area in diabetes." Eurasian scientific herald. Vol13/2022/ 97-101стр.

10. Курбанова Нозима Сабиржановна “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 (WBPH)Volume-8, March 2022 67-72

11. Nazira K., Siddikovna T.G., Davranovna D.A., Takhirovich D.A., Tulkinovich O.S. (2021). Cardiovascular complications in patients with covid and diabetes mellitus 2. Central Asian Medical and Natural Science Journal, 2(3), 37-41.

12. GROWTH HORMONE FOR THE TREATMENT OF HEREDITARY DISEASES IN CHILDREN Ortikov Shahzod Tulkinovich. Karimova Nazira Alimovna, Kurbanova Nozima Sobirjanovna, Daminov Abdurasul Takhirovich / International Journal of Innovative Engineering and Management Research. 2021 281-284.

13. Features of the course of type 2 diabetes mellitus with arterial hypertension and ways of their correction Negmatova Gulzoda Shukhratovna, Salimova Dildora Erkinovna Eurasian Medical Research Journal 17, 39-41, 2023.

14. FEATURES OF THE TECHNIQUE OF TYPE 2 DIABETES MELLITUS IN COMBINATION WITH ARTERIAL HYPERTENSION AND WAYS OF CORRECTION IX G.Sh. Negmatova, D.E. Salimova LLC "Research and publications", Enlightener, 2023.

15. Features of the coexistence of type 2 diabetes mellitus with arterial hypertension and their treatment Gulzoda Shukhratovna Negmatova, Dildora Erkinovna Salimova LLC "Ochik fan", Science and education, 2023.

16. Khalimova Z.Yu. and G.Sh. Negmatova. Autoimmune polyglandular syndromes. Literature review". Central Asian Journal of Medical and Natural S

17. Даминов А., Хайдаров О., Хасанова М. и Абдукахорова Р. (2023). ОСЛОЖНЕНИЯ ГЛЮКОКОРТИКОИДНОЙ ТЕРАПИИ У ПАЦИЕНТОВ С ДИАБЕТОМ, ПЕРЕЖИВШИХ КОВИД-19. Евразийский журнал медицинских и медицинских наук , 3 (4), 197-200.ciences 2.4 (2021): 166-175.

18. Khamidova M.N., Ismatova I.F., Zh.Sh. Berdirov, G.Sh. Negmatova and A.T. Daminov. "DIABETES AND COVID-19". Eurasian Journal of Medicine and Natural Sciences 2, no. 13 (2022): 190-204.

19. Takhirovich D.A., Burchaklar S.J.A., Shukhratovna N.G., Shukhratovna S.G., Zainuddinovna M.G. (2022). COURSE OF COVID-19 IN PATIENTS WITH DIABETES. Web of Scientist: International Journal of Scientific Research, 3(02), 73–76.

20. Takhirovich D.A., Korners S.J.A., Shukhratovna N.G., Shukhratovna S.G., Zainuddinovna M.G. (2022). COURSE OF COVID-19 IN PATIENTS WITH DIABETES. Web of Scientist: International Journal of Scientific Research, 3(02), 73–76.

21. Abduvali, X., Otabek, S., Asilbek, E., & Daminov, A. T. (2023). TYPE 2 DIABETES: TIME TO CHANGE THE CONCEPT. Science and innovation, 2(D4), 165-167.

22. Togaeva G.S. «Ўз-узини назорат қилиш мактабида ўқиган қандли диабет 2 тип

билан касалланган беморларнинг клиник ва биохимиявий курсаткичлари». Journal of Biomedicine and Practice 2 Special Issue. Tashkent in 2020. Pages 132-135.

23. Togaeva Gulnora Siddikovna., Oripov Firdavs Suratovich., Davranova Aziza Davranovna.: "Structural features of cells of the islets of Langerhans in offspring with alloxonic diabetes" (Review article). Annals of the Romanian Society for Cell Biology 2021; P.158-162

24. Negmatova G.Sh, Togayeva G.S., Davranova A.D., Azimbegova S.N. “Assessment of the effectiveness of cardioprotectiva drugs in treatment of childeren with diabetic cardiomyopathy”/ The American juornal of medical sciences and pharmaceutical research//4.01.
79-83.

25. Negmatova G.Sh., Togayeva G.S., Davranova A.D., Azimbegova S.N. Uzbek medical journal. // Criteria for physical and sexual devolopent in with thyroid diseases. 4. 32.

26. Negmatova G.Sh, Togayeva G.S., Davranova A.D., Azimbegova S.N. “Assessment of the effectiveness of cardioprotectiva drugs in treatment of childeren with diabetic cardiomyopathy”/ The American juornal of medical sciences and pharmaceutical research//4.01.
79-83.

27. Dzhuraeva Z.A. Negmatova G.Sh. The state of the cardiovascular system in patients with hypothyroidism. Use of highly innovative technologies in preventive medicine. Republican scientific-practical conference. Andijon 2020.

28. Z.Y Xalimova G.Sh. Negmatova - "Аутоиммунные Полигландулярные Синдромы. Обзор Литературы”. Central Asian Journal of Medical and Natural Science, 2021

29. Endocrinology: national guidelines. Ed. Dedova I.I., Melnichenko G.A. M.: GEOTAR-Media; 2016.

29. Aramovna D. Z., Azamatovna H. D. Features of the Pathology of the Reproductive System in Pubertal Patients with Hypothalamic-Pituitary Dysfunction //EUROPEAN JOURNAL OF BUSINESS STARTUPS AND OPEN SOCIETY. – 2023. – Т. 3. – №. 2. – С. 74-77.

30. Djurayeva, Z. A., and D. A. Davranovna. "Of Combined Sugar-Reducing Thepary in Treatment of Patients with Type 2 Diabetes." Eurasian Medical Research Periodical 18 (2023): 103-106.

31. Djurayeva Z.A., Togayeva G.S., Davranova A.D.,“Knowledge and Attitude towards Psychiatry among Nursing Staffs in Tertiary Health Care Hospital” Advances in Clinical Medical Research. Volume 3. Issue 2 April-June 2022.

32. Harrison’s Principles of Internal Medicine, 17th Edition Elsevier McGrawHill Medical Education NewYork Chicago San Francisco Lisbon London Madrid Mexico City Milan New Delhi San Juan Seoul Singapore Sydney Toronto

33. Mustafakulov, I. B., and Z. A. Djuraeva. "Severe associated trauma to the abdomen diagnosis and treatment." European journal of pharmaceutical and medical research 7.6 (2020): 113-116.

34. Mustafakulov, I. B., Elmuradov, A., Djuraeva, Z. A., & Umedov, H. A. (2021). DIAGNOSTIC TOOLS AND THERAPEUTIC POSSIBILITIES OF ENDOVIDEOLAPAROSCOPY FOR COMBINED ABDOMINAL TRAUMA. Journal of Natural Remedies, 22(1 (2)), 181-186

35. Джураева З.А., Гарифулина Л.М. “Динамическая оценка развития осложнений сахарного диабета 1 типа у подростков”. Инфекция, иммунитет и фармокология. №1 2015. Тошкент стр 47-50