

Assessment of the Level of Knowledge of Residents of Samarkand Region about Osteoporosis

Kurbanova Nozima Sobirdjanovna

Assistant of the Department of Endocrinology, Samarkand State Medical University

Abdurasulov Abdumaruf, Bobomurodov Tolib, Ixmatov Shavkat, Omonova Dilorom

Students of the Samarkand state Medical University

Abstract: Relevance. Osteoporosis (OP) —a systemic skeletal disease that reduces bone strength, leading to an increased risk of fractures. Bone strength is determined by a combination of quantitative and qualitative characteristics: bone mineral density (BMD) and architectonics, bone turnover, accumulation of damage, bone mineralization. Osteoporosis (OP) is a systemic skeletal disease in which bone strength decreases, leading to an increased risk of fractures. Bone strength is determined by a combination of quantitative and qualitative characteristics: bone mineral density (BMD) and architectonics, bone turnover, accumulation of damage, bone mineralization. The disease develops gradually and is often clinically diagnosed after a fracture, which allows it to be characterized as a “hidden epidemic.” The aging population is leading to a significant increase in the incidence of osteoporotic fractures, especially in postmenopausal women. If the rate of increase in life expectancy and the number of elderly people observed in the last decade continues, the incidence of osteoporotic fractures is expected to increase by 2.4 times by 2050 [1]. According to WHO experts, AP is one of the most common diseases, which, along with myocardial infarction, oncological pathology and sudden death, occupies a leading place in the structure of morbidity and mortality of the population. The relevance of the problem of AP is also due to its relationship with cardiovascular diseases (CVD). An associative relationship between the severity of vascular wall calcification and the condition of bone tissue was revealed. It is known that in elderly people after a femoral neck fracture (FNC), more pronounced atherosclerotic vascular damage is observed on the affected side [2, 3]. More than 70% of patients who have suffered a fracture of the cervical spine are diagnosed with CVD, and a high incidence of deaths has been identified in the combination of CVD and fractures of the cervical spine. The presence of at least one vertebral fracture or AP leads to a 3-fold increase in the risk of developing cardiovascular complications [4].

Key points: osteoporosis, public awareness, Samarkand region.

Introduction. The disease develops gradually and is often clinically diagnosed after a fracture, which allows it to be characterized as a “hidden epidemic.” The aging population is leading to a significant increase in the incidence of osteoporotic fractures, especially in postmenopausal women. If the rate of increase in life expectancy and the number of elderly people observed in the last decade continues, the incidence of osteoporotic fractures is expected to increase by 2.4 times by 2050 [1]. According to WHO experts, AP is one of the most common diseases, which, along with myocardial infarction, oncological pathology and sudden death, occupies a leading place in the structure of morbidity and mortality of the population.

Target– to study the awareness of the general population of the Samarkand region (RO) about the significance, clinical picture and methods of preventing osteoporosis (OP) and fractures.

Material and methods. A survey was conducted of a random sample of 2024 (1720 women and 304 men) respondents without a verified diagnosis of AP aged 20–93 years, median 54.0 years [43.0; 64.0]. The work was carried out as a cross-sectional study in a sample of the adult population of the Moscow region. Obtaining data was planned through a questionnaire survey, which was conducted on the basis of municipal treatment and preventive institutions in 10 districts and 3 cities and urban formations of the Moscow Region. The questionnaire included 10 items with “Yes” or “No” answers on general questions, prevention and diagnosis of AP, which were duplicated by questions requiring free-form answers and interpreted in points.

Results. In the results obtained, the respondents had a general level of knowledge on EP – a median of 3 [1, 6] points (out of 10 possible points). A high level of knowledge was noted for general ideas about AP - median 2 [0, 3], to a lesser extent about methods of its prevention - median 1 [1, 2] and was practically absent for early diagnosis - median 10.0 [11].

In general, among the respondents, the median of the general level of knowledge about OP (PZOP) (i.e., the total number of “Yes” answers to all 10 questions of the test) turned out to be low: the median PZOP of the surveyed women was 4.0 positive answers [1.0; 6.0] out of 10 possible in the test and was significantly higher than in men, whose median general level of knowledge was only 2.0 positive answers [0.0; 4.0] out of 10 possible. Thus, among MO respondents, women had higher awareness of OP than men, both in the questionnaire as a whole and in all 10 points separately ($p < 0.001$ Mann–Whitney test). The respondents were most informed about which foods are rich in calcium (78% knew) and what OP is (58%), least about the amount of calcium needed by a woman in menopause (only 10% of women knew), and about bone densitometry (only 11% knew). respondents) (see table).

Public awareness of the problem of osteoporosis

No.	Indicators	%
1.	Do you know which foods are rich in calcium?	78
2.	Do you know what osteoporosis is?	58
3.	Do you know why osteoporosis is dangerous?	54
4.	Do you know methods for preventing osteoporosis?	44
5.	Do you know methods for preventing fractures?	38
6.	Do you know the clinical manifestations of osteoporosis?	34
7.	Do you know the risk factors for osteoporosis?	25
8.	Do you know methods for diagnosing osteoporosis?	16
9.	Do you know what bone densitometry is?	11
10.	Do you know how much calcium a postmenopausal woman needs daily? (only for women)	10
11.	Do you know how much calcium a postmenopausal woman needs daily?	9

When carrying out the Kruskal–Wallis analysis of variance, a significant non-monotonic (with a maximum in the age group of 40–59 years) dependence of SOP on age was found: $H(6, N = 2013) = 120.57, p < 0.0001$. The lowest SOP was detected at the age of 80 years and older - the median of positive answers in the test was 1.0 [0.0; 3.0], as well as at the age of 70–79 years – median 2.0 [1.0; 5.0] and under 30 years of age – median 2.0 [1.0; 4.0], and the highest at the age of 40–49 years – median 4.0 [1.0; 7.0] and 50–59 years – median 4.0 [2.0; 7.0]. SPD is largely influenced by the level of education. This is evidenced by the identified significant dependence of the overall SPD on the level of education - gamma correlation coefficient $\gamma = 0.339 (Z = -15.7), p < 0.000001$. The highest awareness of the problem of OP is observed among people with higher education - the median of affirmative answers was 5.0 [2.0; 7.0], somewhat less – among respondents with secondary specialized education – 4.0 [1.0; 6.0] and the lowest – among respondents who graduated from secondary school – 1.0 [0.0; 3.0] or primary school – 1.0 [0.0; 2.0]. When carrying out the Kruskal–Wallis analysis of variance, a statistically significant dependence of SPD on employment was revealed: $H(4, n=1711)=45.97, p=0.0001$. Working respondents of working age turned out to

be the most informed - median 4.0 points [1.0; 7.0] and pensioners – median 4.0 points [1.0; 6.0], unemployed middle-aged people were less informed – median 3.0 points [0.0; 4.0] and non-working pensioners – median 3.0 points [1.0; 5.0]. Students knew practically nothing about EP - median 0.0 points [0.0; 3.0].

Conclusions. It is necessary to increase the level of knowledge of the population, especially older people of retirement age, on prevention, early diagnosis and risk factors for AP. The revealed low SPD indicates the need for widespread implementation of educational programs for the population.

References:

1. Shernazarov F, Tohirova J, Jalalova D. TYPES OF HEMORRHAGIC DISEASES, CHANGES IN NEWBOENS, THEIR EARLY DIAGNOSIS. *Science and innovation*. 2022;1(D5):16-22.
2. Zhalalova DZ. The content of endothelin and homocysteine in blood and lacrimal fluid in patients with hypertensive retinopathy *Web of Scientist: International Scientific Research Journal*. ISSUE. 2022;2:958-963.
3. D.Jalalova, X.Raxmonov, F.Shernazarov. THE ROLE OF C-REACTIVE PROTEIN IN THE PATHOGENESIS OF VISUAL VASCULAR DISEASES IN PATIENTS WITH ARTERIAL HYPERTENSION. *SAI*. 2022;1(8):114-121. doi:10.5281/zenodo.7335637
4. D.Jalalova, X.Raxmonov, F.Shernazarov. SIGNIFICANCE OF ENDOTHELIAL DYSFUNCTION IN THE DEVELOPMENT OF RETINOPATHY IN PATIENTS WITH AH AND WAYS OF ITS CORRECTION. *SAI*. 2022;1(8):101-113. doi:10.5281/zenodo.7335616
5. Shernazarov F, Zuhridinovna JD. MICROCIRCULATION DISORDERS IN THE VASCULAR SYSTEM OF THE BULBAR CONJUNCTIVA IN THE INITIAL MANIFESTATIONS OF CEREBRAL BLOOD SUPPLY DEFICIENCY. *Science and innovation*. 2022;1(Special Issue 2):515-522.
6. D.Jalalova, N.Normatova, F.Shernazarov. GENETIC MARKERS FOR THE DEVELOPMENT OF DIABETIC RETINOPATHY. *SAI*. 2022;1(8):919-923. doi:10.5281/zenodo.7443019
7. Нарбаев А, Джураева З, Курбонова Н, Кувондиқов Г, Давранова А, Содиков С. Особенности изучения многофакторного управления сахарным диабетом 2 типа. *Журнал проблемы биологии и медицины*. 2017;(4 (97)):78-79.
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. Takhirovich 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, Takhirovich DA, Tulkinovich OS. Cardiovascular complications in patients who have had covid on the background of diabetes mellitus 2. *I*. 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, Abdukakhorova 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, Oybekovna 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. Takhirovič 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.
35. Ismoilov JA, Egamberdiyeva YK kizi, Mahmamuradova NN, Daminov AT. FEATURES OF VITAMIN-D METABOLISM IN PATIENTS WITH DIABETIC NEPHROPATHY. *Educational Research in Universal Sciences*. 2024;3(4 SPECIAL):681-689.
36. Xudoyorov S, Mirkomilova M, Burxonov U, Sayfiyeva G, Sheralieva N, Daminov AT. Fourniers gangrene in modern conditions. *Science and Education*. 2023;4(12):107-117.
37. Alimovna KN, Sobirjanovna KN, Abdurasul D, Tulkinovich OS. GROWTH HORMONE FOR THE TREATMENT OF HEREDITARY DISEASES IN CHILDREN. 10.
38. Negmatova .G.Sh, D.e S, Qizi MZO, Mannobovich MS, Orifjonovich MM. HERPETIC MENINGITIS. *PEDAGOG*. 2022;5(5):346-348.
39. Ahrorbek N, Myungjae L, Jungjae L, et al. Hormonal Regulation. *Texa Jour of Mutl Stud*. 2023;25:39-43.
40. Ismoilova SI. Impact of vitamin D deficiency on the risk of developing type 1 diabetes. *Science and Education*. 2023;4(3).
41. Даминов АТ, Хакбердиева В, Жаникулов С, Муродхонов С. КЛИНИЧЕСКИЙ СЛУЧАЙ ПЕРВИЧНЫЙ ГИПОТИРЕОЗ. *Educational Research in Universal Sciences*. 2024;3(3 SPECIAL):131-134.
42. Мизамова МАК, Эшпулатова ГНК, Эшмуродова ЗНК, Салимова ДЭ. Осложнения акромегалии, связанные со здоровьем, текущие и перспективные варианты лечения. *Science and Education*. 2023;4(4):187-195.