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# FREQUENCY OF DIABETIC RETINOPATHY IN THE POPULATION OF SAMARKAND

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**Annotation. Relevance.** The number of patients with diabetic retinopathy (DR) is increasing every year. Today, the priority task of healthcare reform is to find ways to maximize the availability of specialized ophthalmological care for patients with DR. **Purpose of the study.** Conducting an epidemiological analysis of patients with diabetes mellitus who applied to public medical institutions to determine the frequency and structure of DR. **Materials and methods.** The object of the study was patients who applied to the State medical institutions of the city of Samarkand with type 1 and type 2 diabetes (DM1 and DM2) in 2023. **Results and conclusion.** The results of the study showed that the prevalence of DR in the city of Samarkand corresponds to global indicators. DR was present in 5440 (58.8%) patients with diabetes mellitus.

**Keywords:** diabetes mellitus, diabetic retinopathy, fundus, retina.

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# ЧАСТОТА ВСТРЕЧАЕМОСТИ ДИАБЕТИЧЕСКОЙ РЕТИНОПАТИИ У НАСЕЛЕНИЯ г. САМАРКАНДА

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**Аннотация. Актуальность.** С каждым годом увеличивается численность пациентов с диабетической ретинопатией (ДР). На сегодняшний день приоритетной задачей реформирования здравоохранения является поиск путей максимальной доступности специализированной офтальмологической помощи пациентам с ДР. **Цель исследования.** Проведение эпидемиологического анализа пациентов с сахарным диабетом (СД), обратившихся в государственные медицинские учреждения для определения частоты и структуры ДР. **Материалы и методы.** Объектом исследования стали пациенты, обратившиеся в Государственные медицинские учреждения г. Самарканда с СД 1 и 2 типа (СД1 и СД2) за 2023 год. **Результаты и заключение.** Результаты исследования показали, что распространённость ДР в г. Самарканде соответствует общемировым показателям. ДР присутствовала у 5440 (58,8%) больных СД.

**Ключевые слова:** сахарный диабет, диабетическая ретинопатия, глазное дно, сетчатка.

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# SAMARQAND SHAHRI AHOLISI ORASIDA DIABETIK RETINOPATIYANING UCHRASH CHASTOTASI

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**Annotatsiya. Dolzarbligi.** Diabetik retinopatiya (DR) bilan og'rigan bemorlarning soni yil sayin ortib borayotgani yaqqol ko'rinib turibdi. Bugungi kunda DR bilan og'rigan bemorlarga ixtisoslashtirilgan oftalmologik yordam ko'rsatish imkoniyatlarini maksimal darajada oshirish yo'llarini izlash sog'liqni saqlash tizimining ustuvor vazifasi hisoblanadi. **Tadqiqot maqsadi.** Davlat tibbiyot muassasalariga murojaat qilgan qandli diabet (QD) bilan og'rigan bemorlarning ichida DR bilan og'rigan bemorlarni sonini aniqlash uchun epidemiologik tahlilini o'tkazish. **Materiallar va usullar.** Tadqiqot ob'ekti — 2023 yilda Samarqand shahar davlat tibbiyot muassasalariga 1 va 2 turdagi QD bilan murojaat qilgan bemorlar bo'ldi. **Natijalar va xulosa.** Tadqiqot natijalari shuni ko'rsatdiki, Samarqand shahrida DR tarqalishi global ko'rsatkichlarga mos keladi. QD bilan kasallangan 5440 (58,8%) bemorda DR mavjud edi.

**Kalit so'zlar:** qandli diabet, diabetik retinopatiya, ko'z tubi, to'r parda.

**Iqtibos uchun:**

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**Relevance.** Prevention of diabetic retinopathy is one of the pressing problems, both in the field of domestic and foreign healthcare, due to the progressive increase in the prevalence of diabetes among the population, which ultimately leads to vision loss and social impairment [1].

According to the conclusion of the WHO research group, the main obstacles to the effective prevention of blindness from DR are the unplanned work of outpatient ophthalmologists, examination of the fundus with a narrow pupil, untimely referral of patients for laser treatment, lack of necessary equipment and experienced ophthalmologists specializing in the treatment of DR, difficulties in traveling to Regional center and the high cost of travel to specialized institutions [3, 4, 5].

Despite the large number of global epidemiological ophthalmopathological studies conducted around the world. Of particular interest are studies in regions with ethno-cultural and geographical distinctiveness, where there are likely to be quantitative and qualitative epidemiological features, in particular diabetic retinopathy. Interregional differences in the frequency of registration of DR were also noted in studies of domestic ophthalmologists. Thus, in type 1 diabetes, the frequency of DR varied from 3.7% to 69.4%, in type 2 diabetes — in the range from 1.9% to 48.7%, respectively [6]. Type 2 — in the range from 1.9% to 48.7%, respectively [6].

The issues of improving the organization of early diagnosis and properly balanced treatment of diabetic retinopathy today remain among the pressing problems of ophthalmology [2].

Today, the effectiveness of screening can only be achieved through consistent, coordinated, successive actions of all medical workers caring for patients with diabetes and doctors in laser eye surgery offices [7].

**Purpose of the study.** Conducting an epidemiological analysis of patients with diabetes mellitus who applied to public medical institutions to determine the frequency and structure of diabetic retinopathy.

Materials and methods. The studies were carried out on the basis of the Samarkand Regional Endocrinological Dispensary and on the basis of the diagnostic and treatment center "LLC A. A. Yusupov.»

The object of the study was patients who applied to the State medical institutions of the city of Samarkand with type 1 and type 2 diabetes (DM1 and DM2) in 2023.

Results and discussions. Analysis of statistical data obtained from the Departments of Health and Statistics of the city of Samarkand allowed us to estimate the prevalence of diabetes mellitus and diabetic retinopathy.

According to statistical data, diabetes was observed in 9252 people. Among them, 2930 (31.7%) men, 6322 (68.3%) women. Type 1 diabetes was observed in 1480 (16.0%) people, type 2 — in 7772 (84.0%) people. Statistical data showed that diabetes among people over 40 years of age is 13.7%: among men — 13.7%, among women — 15.3%.

Diabetic retinopathy was present in 5440 (58.8%) patients with diabetes mellitus.

When divided by disease stage, the nonproliferative stage occurred in almost half of the patients (49.4%). This stage of retinopathy was mainly found in patients with type II diabetes mellitus with a course of moderate severity and subcompensation.

The preproliferative stage was identified in patients with diabetes mellitus in 32.7% of cases, and patients

over the age of 50 years were more likely to suffer from type II diabetes mellitus, with moderate severity and a state of subcompensation.

The proliferative stage occurred in 17.9% of patients with diabetes. Most patients with this stage were over 50 years of age. Patients in this group had the highest history of diabetes duration.

**The results of the study** showed that the prevalence of DR in the city of Samarkand corresponds to global indicators. Statistics show a significant increase in the incidence of DR among women. Also, the predominance of the proliferative form of DR among women is visible. The results obtained in this study show some differences with the results of most other studies, where the prevalence of DR is often not associated with gender characteristics.

According to the results of the study, the predominance of the frequency of PDR in the population is another feature of this study, which is due to the less frequent use of the population for specialized ophthalmological medical care. This study shows that carrying out a number of activities to improve the quality of specialized ophthalmological care and expand sanitary educational work with the population is one of the main tasks of the Healthcare system.

**Conclusions.** Thus, in 2023, 9252 patients with diabetes mellitus applied to the State medical institutions of the city of Samarkand, of which 5440 were diagnosed with diabetic retinopathy. Given the high prevalence of diabetic retinopathy, additional research is needed to identify the causes and possible delays in the timely referral of patients with diabetic retinopathy to specialized ophthalmological care. It is also advisable to improve the mechanisms for medical examination of patients with diabetes, including clear communication between general practitioners, endocrinologists and ophthalmologists monitoring this category of patients

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