THE ORIGIN, DIAGNOSIS AND MODERN CLINICAL DIAGNOSTICS OF ANGLE-CLOSURE GLAUCOMA

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Relevance of the study: According to the International Diabetes Federation (IDF), in 2019, the number of people with diabetes mellitus (DM) exceeded 463 million people [1]. In Russia, according to the State Register of Patients with Diabetes mellitus for 2018, their number was 4.58 million, which is 3.1% of the country's population. These data show only the number of patients registered in the dispensary, but according to the All-Russian Epidemiological Study on Type 2 Diabetes NATION, there is a significantly larger group of people who are unaware of their disease [2]. The number of undiagnosed cases reaches about 46%, which increases the total number of patients with diabetes in Russia to 8.5-9 million people, which is already about 6% of the population [3]. Patients in this category do not receive the necessary therapy and are not warned about the complications that diabetes can cause. These include patients with ocular pathology in the anterior segment of the eye - secondary neovascular glaucoma (NG) complicated by cataracts, corneal ulcers, etc., and in the posterior segment - hemophthalmos and retinal detachment caused by the unfavorable development of diabetic retinopathy (DR) [4].

Materials: DR is characterized by damage to the retinal vessels and is one of the severe complications of diabetes. The medical and social significance of this problem is very high, since the patient has a high risk of disability. Thus, according to the conducted study "Diabetic Retinopathy Barometer", 83% of the surveyed diabetic patients know about such a terrible complication as vision loss. Moreover, every 7th patient attributes their visual impairment to age-related changes, the cause of which is the underlying disease [5]. In Russia, as of 01.01.2019, DR was recorded in more than 850 thousand patients [6].

Research methods: In 1963, DI Weiss and colleagues first proposed the term "neovascular glaucoma" (NG). G. Coats first described newly formed vessels in the iris in a patient with central retinal vein occlusion. With the introduction of gonioscopy into clinical practice - examination of the angle of the anterior chamber of the eye - it became possible to see newly formed vessels in the projection of the trabecular zone, and the increase in intraocular pressure (IOP) was explained

by mechanical closure of the iridocorneal angle [7]. Due to the high degree of disability, many authors consider NG to be an important and urgent problem of modern ophthalmology [8].

Results: A clinical case of angle-closure glaucoma due to occlusion of the anterior chamber angle by a ciliary body cyst is presented. Patient A., 42 years old, complained of temporary blurred vision in the right eye and worsening of night vision. At the initial ophthalmological examination, the best-corrected visual acuity of both eyes was 1.0, intraocular pressure according to pneumotonometry: OD - 21 mm Hg. Art., OS - 14.8 mm Hg. Art. During biomicroscopy, no changes were detected in the anterior segment of the eyeball. Taking into account the asymmetry of IOP data, the patient underwent the following studies: static perimetry, optical coherence tomography (OCT), flowmetry with calculation of intraocular pressure (TIOP).

According to the data of OCT and static perimetry, no pathological abnormalities were detected. In the left eye, flowmetry parameters were within normal limits, but in the right eye, a significant decrease in volumetric ocular blood flow and an increase in IOP were detected. When calculating TVGD, we found asymmetry of the values. In the left eye, TGVD coincided with IOP, and in the right eye, IOP values exceeded the TGVD value. The lack of correlation between morphofunctional parameters and flowmetry data, an uncomplicated hereditary history of glaucoma, and a discrepancy between flowmetry parameters and age may indicate the development of glaucoma, so the patient was referred to UBM. The echographic picture of the anterior segment of the right eye was characterized by a decrease in the depth of the anterior chamber, partial forward displacement of the peripheral part of the iris, a slight narrowing of the angle of the anterior chamber, and uneven posterior chamber. A large, thin-walled, anechoic mass with clear contours and dimensions, 4.3 mm high and 4.8 mm long, was detected in the area of the process of the ciliary body along the 3 o'clock meridian. The iris root was identified with its medial attachment to the ciliary body. Accordingly, the diagnosis was made: OD - ciliary body cyst, the patient was referred for consultation for possible laser surgery

Discussion: Currently, the generally accepted classification of DR is the WHO classification proposed by E. Kohner and M. Porta in 1991, in which secondary NH is not a separate stage of proliferative DR, but a complication of the advanced process (with narrowing of the retina). These severe complications often lead to blindness.

Conclusion: Patients with a combination of NG and diabetes pose great difficulties for doctors, as they have to simultaneously struggle with two serious diseases - diabetes and glaucoma. The availability of modern, high-tech diagnostic and treatment equipment significantly expands the possibilities of treating these patients, but does not eliminate the need to search for new

treatment methods. Close communication between specialists of various profiles (ophthalmologists, endocrinologists, etc.) in the treatment of this pathology can achieve significant success in solving this problem. The issues of pathogenesis, classification, diagnosis, treatment and prevention of secondary NH in patients with diabetes mellitus are relevant and require further research to improve the social adaptation and integration of these patients into modern society.

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