Czech
Journal of Multidisciplinary Innovations
Volume 22, October, 2023.
Website: www.peerianjournal.com
ISSN (E): 2788-0389
Email : editor@peerianjournal.com

Diabetic retinopathy, tactics for patients

Abdurakhmonov Niyozbek Khamdamjon ogli
Ophthalmologist Ferghana Medical Institute of Public Health

Annotation: An analysis of the prevalence of ophthalmic complications in patients with Type 1 and 2 diabetes mellitus, as well as the main causes of disability with this pathology is presented. The main methods of treatment of prediabetic and proliferative retinopathy are covered. The use of the presented tactics reduces the incidence of blindness and helps to improve the quality of life of patients with diabetes.

Keywords: Diabetic retinopathy, panretinal laser coagulation, intravitreal Drug Administration.Diabetic retinopathy, tactics for patients

Introduction: Diabetes mellitus (DM) is one of the most serious medical and social problems worldwide. This is due to the high prevalence of both the disease itself and its complications, the high cost of diagnostic and treatment tools, and the significant impact of the disease on the social adaptation of the patient in modern society. Currently, more than 170 million people suffer from diabetes in the world, and by 2030 their number will exceed 366 million. Current research suggests that more than 16 million Americans have diabetes, but only half of them are aware of their disease. More than 2.5 million people with diabetes have been registered in the Russian Federation, but the real number of patients is much larger, and it is constantly increasing. In some regions, the ratio of detected cases of diabetes to their actual number is 1:4.

The proportion of severe forms of diabetic retinopathy (pre- and proliferative) also depends on the type and duration of DM. In patients with DM1 with a 5-year period of the disease, retinopathy is 10.59%, and with a 10-year duration of DM, it increases by more than 6 times - 66.58%. In patients with DM2 with a disease duration of 5 years, it is 7.86%, and after 10 years it increases to 44.1%.

The high prevalence and rapid development of proliferative diabetic retinopathy (PDR) lead to the fact that there is a significant group of young able-bodied patients who need repeated and volumetric laser interventions, which are one of the main and radical ways to treat severe diabetic retinal lesions. There are many classifications of diabetic retinopathy, which are based on various criteria for the course of the disease. Currently, classification is used in most European countries. It is simple and convenient in practical application, it clearly traces the stages of the process of diabetic retinal damage. At the same time, predicting the course of the disease and choosing the tactics of PDR treatment, it is convenient to use the classification for the study of early treatment of diabetic retinopathy developed by the ETDRS research group. PDR3 (severe stage) is stated in cases where there is one of the signs:

- preretinal or vitreal hemorrhage of more than one and a half area of the ZN;
- preretinal or vitreal hemorrhage of less than one and a half of the area of the ZN in combination with neovascularization of the retina of more than half of the area of the ZN;
- preretinal or vitreal hemorrhage of less than one and a half of the area of the DZN in combination with neovascularization of the DZN of less than a third of its area;
- neovascularization of the ZEN more than a third of its area.

Czech
Journal of Multidisciplinary Innovations
Volume 22, October, 2023.
ISSN (E): 2788-0389
Website: www.peerianjournal.com
Email : editor@peerianjournal.com

PDR4 (very severe stage) is determined in cases when the neovascularization of the DZN is more than a third of its area and preretinal or vitreal hemorrhage is more than one and a half of the area of the DZN.

The Diabetic Retinopathy Study Research Group (DRS) identified pathological risk factors for significant vision loss. This is preretinal (or vitreal) hemorrhage, neovascularization of the ZEN more than a third of its area, or neovascularization of the retina more than half of the area of the ZEN. Proliferation in diabetic retinal lesions is of two types: vascular and fibrous. As a rule, it is formed in the area of the ZEN or along the course of the vascular arcades (central form), but can be located in any other areas of the fundus (peripheral form). The newly formed vessels first grow between the posterior hyaloid membrane (HRM) of the vitreous body and the retina. The failure of the wall of newly formed vessels leads to frequent hemorrhages - both preretinal and vitreal. Recurrent retrovitreal hemorrhages, which occur due to posterior vitreous detachment, and proliferation of glial cells along the CGM over the areas where vitreoretinal adhesions are the most durable, lead to the formation of traction, causing retinal detachment.

The main methods of treating PDR today are retinal laser coagulation and vitreoretinal surgery, which is confirmed by the data of numerous studies (domestic and foreign) published over the past 30 years [1, 3, 4]. It is information about the high efficiency of retinal laser coagulation as a means of preventing vision loss that has become the basis for the development of screening programs for retinopathy. In 1968, L. Aiello et al. [4] reported the first results on the treatment of PDR by coagulation, but only by 1987, after large-scale studies of DRS and ETDRS, the method received worldwide recognition, since the indications for laser coagulation were precisely formulated and its effectiveness was reliably proven [6, 7, 9]. The WHO Research Group, considering that currently there are no interventions that would have a reliably favorable result comparable to laser exposure, does not recommend considering other therapeutic effects when developing screening strategies. Panretinal retinal laser coagulation (PRLC) consists in applying coagulates practically over the entire area of the retina, excluding the macular area. The timing of the PRLC (performance of the first session) should be as follows: with PDR1, treatment is carried out within 4-6 weeks from the moment of diagnosis; in subsequent stages - within 3-4 weeks from the moment of diagnosis.

Conclusion: Reducing the number of new cases of blindness due to improving the quality of ophthalmological and endocrinological care can have a significant financial and humanitarian effect, which will allow additional funding for screening and laser treatment programs for diabetic retinopathy. A systematic and integrated approach to ophthalmoendocrinological management of patients with DM will allow us to get closer to fulfilling the task set by the declaration: to reduce by one third or more the number of new cases of blindness caused by diabetes and, consequently, contribute to maintaining a high quality of life for these patients.

Reference:

1. Semenov V.Yu., Skvortsova E.S. Organization of preventive work in the Moscow region // Zdravookhr. RF. 2009. No. 1. pp.3-8.
2. Shadrichev F. E. Practical aspects of ophthalmological management of patients with proliferative diabetic retinopathy // Ophthalmol. vedomosti. 2008. No. 1. pp.58-63.

Czech
Journal of Multidisciplinary Innovations
Volume 22, October, 2023.
ISSN (E): 2788-0389
Website: www.peerianjournal.com
Email : editor@peerianjournal.com

3. Aiello L., Beetham U., Marios K. B. et al. Photocoagulation with a ruby laser in the treatment of proliferative diabetic retinopathy: a preliminary report // Symposium on the treatment of diabetic retinopathy / edited by M. Goldberg, S. Fine. Washington, 1968. pp.437-463.