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Clinical Diagnostic Features and Justification of Complex Treatment of Diseases of Eye Con Inflammation

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Abstract: This review article discusses current views on etiological factors, the pathogenesis of complications of inflammatory diseases of the vascular tract of the eye and modern methods of treatment.

Key words: OCT, PZO, DZN.

Introduction

Improving methods for diagnosing and treating inflammatory diseases of the vascular tract (CTD) is of particular importance today on a global scale. According to the World Health Organization, complications of CTD make up 28% of the causes of eye disability. The spread of this disease among the working population, its severe course, in 20-40% of cases the development of optic nerve atrophy (ON) leads to the development of irreversible visual impairment. In more than 22% of cases, loss of ability to work and disability develops, thereby reducing the quality of life of patients. In the field of scientific research, determining the characteristics of the course of various stages of CTD, establishing the etiopathogenesis of inflammation of the optic nerve and optimizing treatment methods remains one of the most important problems in ophthalmology. A number of scientific studies in this direction have been carried out in Uzbekistan. Early diagnosis and differential diagnosis of pathologies of the vascular tract is carried out in the Republic of Uzbekistan under the guidance of Professor Kh.M. Kamilova. The professor and his students (Kasimova M.S., 2009) solved the problems of remote perimetry and computerization of the database of inflammatory and ischemic lesions of the optic nerve. However, studies on the interpretation of indicators of clinical and morphological diagnostic methods for CTD have not been conducted. Taking into account the above, the substantiation of new clinical and morphological studies in CTD, improvement of methods of prevention and treatment, study of etiopathogenetic causes and diagnostic problems in CTD, improvement of immunobiochemical, functional and methods, and the development of new treatment regimens for CTD are considered necessary and important in practical practice.

Purpose of the study: based on clinical and functional indicators of the eye, to determine the characteristics of the course and improve the principles of treatment of inflammatory diseases of the vascular tract depending on the stage of the disease. establish clinical and functional criteria for optic neuritis (ONN) depending on the stage of the disease;

determine the diagnostic significance of methods (MRI and MR tractography) for NMN; to study the effectiveness of complex treatment of NON according to the stages of the disease based on clinical and functional indicators of the eye;
develop a diagnostic algorithm and principles of treatment for patients with MN.
Materials and research methods. Clinical material was collected at the clinic of the Andijan Medical Institute. For the period 2021-2022. We examined and treated 100 patients (118 eyes) with NLD of inflammatory etiology. The control group consisted of 18 practically healthy people without somatic pathology.
The criteria for inclusion of patients in the study population were:
1. Established diagnosis of MN.
2. Sick and healthy individuals who gave written informed consent to participate in the study.
3. Acute or recurrent course of the disease.
The diagnosis of NLD was established on the basis of anamnesis and examination results: decreased visual acuity; the presence of discomfort or pain when moving the eyeballs; impaired color vision; changes in the visual field in the form of a concentric narrowing to white, absence or narrowing of the visual field to red; decreased afferent pupillary reflex; the presence of edema or other changes in the optic disc during ophthalmoscopy; changes on OCT (RNFL and NRP thickness, lack of physiological excavation); prolongation of latency and decrease in P100 amplitude at VEP.

Results and discussion:

Exclusion criteria from the study:

1. Patients with concomitant diseases of the organ of vision that could affect the interpretation of the results (conjunctivitis, uveitis, glaucoma, dystrophic and other ischemic, vascular and oncological eye diseases).

2. Sarcoidosis, Behcet's disease, lymphoma.

3. Severe concomitant somatic pathology (clinically significant pathology of the cardiovascular, endocrine, respiratory system, gastrointestinal tract), which makes it difficult to perform studies or interpret their results.

Among the patients, there were 44 men, 56 women. The distribution of patients by gender showed that women were sick more often (62.3%) than men (37.7%).

The age of the patients ranged from 5 to 60 years, averaging 29.9±1.18 years for women and 31.3±1.68 years for men.

Distribution of patients with CTD by age

Age (in years)

Up to 10 10-19 20-29 30-39 40-49 50<

Abs % Abs % Abs % abs % Abs % Abs %

2 2 21 21 39 39 19 19 12 12 7 7

As evidenced by the majority of patients aged 10 to 39 years (81%). The distribution of the patient population according to social characteristics showed a predominance of young people of working age (62%).

The formation of groups depending on the etiology, stage of the disease, severity and clinical and functional manifestations was homogeneous.

When dividing 100 patients (118 eyes, with NMN of inflammatory etiology) into groups, we used G.D.'s classification. Zhaboedov 2006 (Ukraine, Kiev), according to which 4 groups of patients were identified depending on the stage of inflammatory edema of the optic disc: group 1,

31 eyes in the stage of optic disc hyperemia; 2–31 eyes in the stage of optic disc swelling; 3–30 eyes in the ischemic stage; 4–8 eyes with the glial-atrophic stage of the disease. In our opinion, this classification most fully reflects the course of the pathological process in the optic nerve and is convenient for practical use. The control group consisted of 12 patients (24 eyes).

Distribution of patients with CTD by disease stages.

Depending on the type of treatment, 2 groups of patients were taken.

In the control group, there were 12 patients (24 eyes), traditional treatment was used: anti-inflammatory, decongestant, desensitizing, antibiotic therapy, and also, if indicated, antiviral therapy.

In the main (1, 2, 3, 4 - subgroups) group of 100 patients (118 eyes), complex treatment was used with the addition of neuroprotective therapy. The main difference from standard treatment was a differentiated approach depending on the stage of the disease and the early use of a neuroprotective drug, i.e. from the first day of admission of the patient to the hospital.

All examined patients, after the initial ophthalmological examination, were, if necessary, subjected to consultations with other specialists, in particular a therapist, neurologist, endocrinologist, neurosurgeon, otolaryngologist, rheumatologist, infectious disease specialist, and immunologist.

Anamnestic studies showed that the majority of those examined came to the hospital in the later stages of the pathological process. Thus, the time of admission to the hospital in the first 5 days from the onset of the disease was recorded in only 17 patients (17%), from 6 to 14 days - 33 (33%), from 15 to 29 days - 32 (32%), more than 1 months from the onset of the disease – 16 patients (16%). At the same time, the time of transition of the pathological process to the second eye averaged 7.7 ± 1.14 days.

It was also found that in 74 (74%) patients the diagnosis was first detected during our inpatient examination, and 26 (26%) patients had previously received treatment in the community without success. Treatment included vasodilator therapy, antibiotic therapy, mildronate, and emoxypine. The effect was unsatisfactory.

Conclusions:

1. It has been established that clinical and functional criteria for the state of ON, depending on the stage of ON, include CT, OCT and VEP data. Namely, with CP there is a progressive decrease in MD and an increase in PSD; on OCT, an increase in the thickness of the RNFL and NRP in groups 2 and 3, a decrease in these indicators in group 4; an increase in the P100 latency index and a change in amplitude - according to VEP data.

2. MRI of the brain makes it possible to carry out a differential diagnosis of the disease depending on the etiology and has revealed sinusogenic and demyelinating etiologies. MR tractography revealed damage to the fourth neuron in the form of thinning and breakage of nerve fibers, a decrease in FA and an increase in ICD, which indicates the spread of the neurodegenerative process in NMN from the 3rd neuron to the 4th neuron of the visual analyzer.

3. Early use of neuroprotective therapy in the complex treatment of ONH makes it possible to improve clinical, functional and objective indicators in the fundus, which made it possible to achieve a positive result in 79.7% of cases in patients in the stage of ONH hyperemia, in 68.4% -

in the swelling stage , in 50% - in the stage of ischemia and in 13.6% of cases in the stage of atrophy of the optic disc.

4. For the differential diagnosis of various stages of VZN, a diagnostic algorithm has been developed, which includes static perimetry (sensitivity 84%), VEP and OCT (sensitivity 92.9% and 90.1%, respectively), as well as MRI of the brain and MRI (sensitivity 82 %).

5. Pathogenetically oriented principles for the treatment of patients with WNVN have been determined, which include: a differentiated approach according to the stages of the disease, etiological and anti-inflammatory therapy, early neuroprotective therapy.

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