

## EYE PATHOLOGY IN CHRONIC VIRAL HEPATITIS

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**Relevance.** Chronic viral hepatitis B and C, which occupy a dominant place among all liver diseases, are one of the most important problems in modern hepatology due to their widespread prevalence and high incidence rate. According to the WHO, there are approximately 15% of carriers of viral hepatitis B (HBV) and 10% of carriers of viral hepatitis C (HCV) of the entire population of the globe [2,5].

In most cases, viral hepatitis is a systemic disease that occurs with the natural development of various extrahepatic manifestations, which often come to the forefront in the clinical picture. This position is due to the fact that the liver is the leading organ that ensures the dynamic balance of proteins, lipids, carbohydrates, enzymes, biologically active substances, as well as maintaining water-salt balance and acid-base balance. Disruption of these mechanisms leads to significant changes in the microcirculation, which can manifest in various organs and tissues and contribute to secondary clinical manifestations. In some cases, extrahepatic manifestations can become the primary clinical manifestation. Circulating immune complexes in chronic viral liver pathology can cause the appearance of extrahepatic lesions of organs and systems. The accumulated experience of dispensary ophthalmological observation of patients with chronic hepatitis of various etiologies indicates the possibility of various clinical manifestations from the organ of vision, which primarily include dry eye syndrome, keratitis, uveitis, neuro- and retinopathy.

**The aim of the work** is to study the clinical features of diagnosis and treatment of pathology of the visual organ in patients with chronic viral hepatitis B and C during dispensary observation at the stage of the detailed clinical picture.

**Material and methods:** This study included 95 patients with positive serological markers for HBV and HCV and clinical and laboratory syndromes of eye damage. Among them, 47.8% (45 people) were men, 52.2% (50 people) were women. The average age of the examined patients was  $52 \pm 3.7$  years. The study was conducted at the Bukhara Regional Ophthalmology Dispensary. All subjects were tested for hepatitis B and C markers using the ELISA method. The research examined the clinical features of the course of ocular pathology in CHB and CHC. In this direction, two groups were examined that were equal in age, gender, clinical and laboratory data, as well as the severity of eye pathology: the main group (patients with chronic viral hepatitis B and C,

55 people) and the control group (with a similar clinical picture but without hepatitis B and C, 57 people). In conducting our research, we observed all the ethical principles of medical research involving human subjects adopted by the Declaration of Helsinki of the World Medical Association in 1964 (last amended at the 59th General Assembly of the World Medical Association in 2008 in Seoul). The obtained data were processed using nonparametric statistics using a computer program. Correlations with  $p < 0.05$  were considered statistically significant.

**Results and discussion.** The results of a comprehensive examination of patients with chronic viral hepatitis showed that dry eye syndrome (DES) and inflammatory eye diseases play a leading role in the pattern of ocular pathology. The results of the study of clinical features of the diagnosis of dry eye syndrome in patients with chronic viral hepatitis showed that in the main group of patients, a more frequent (compared to the control group) occurrence of lacrimation was noted, as well as rapid eye fatigue and redness during visual exertion (by 9.8% and 36.2%, respectively). Moreover, in 25% of cases, the onset of dry eye syndrome was one of the first manifestations of chronic viral hepatitis.

In addition, the obtained data indicate differences between the severity of dry eye syndrome in patients of different groups, consisting of a more frequent (by 11.5%) manifestation of moderate severity. An analysis of the results of a comparative assessment of the clinical and functional manifestations and characteristics of keratitis and uveitis revealed differences in the frequency of occurrence of a “foreign body sensation” and lacrimation, which was 53.9% more frequent in the main group than in the control group. A comparative assessment of objective clinical manifestations revealed that in patients of the main group, compared to the control group, predominantly mixed forms of the inflammatory process were detected (keratoiridocyclitis was observed 23.3% more often), a higher risk of developing uveitis (by 18.8%) and combined lesions of equal uveal regions and the periphery of the retina (by 5.9%). The presence of microaneurysms and hemorrhages in the fundus was noted in 6.6% of cases only in patients in the study group. Moreover, in 17.9% of cases, the occurrence of inflammatory eye pathology was the first clinical sign of chronic viral hepatitis.

### Conclusions

1. Clinical manifestations of dry eye syndrome in patients with chronic viral hepatitis (compared to the control group of patients with similar symptoms without chronic hepatitis) are characterized by a more frequent (36.2%) the occurrence of the leading complaints for this syndrome (lacrimation, redness of the eyes), the severity of which corresponds to a more severe degree of dry eye syndrome, delayed restoration of the tear film (according to the Schirmer test, on average by 3.2 days,  $p < 0.05$ ). Moreover, in 25%

of cases, the occurrence of dry eye syndrome was one of the first clinical manifestations of chronic viral hepatitis.

2. Inflammatory lesions of the eyes in chronic viral hepatitis are characterized by a more frequent occurrence of leading complaints, mixed forms of the inflammatory process (keratoiridocyclitis), a higher probability of developing uveitis and combined lesions of equal uveal sections and the periphery of the retina, the presence of microaneurysms and hemorrhages in the fundus. Moreover, in 17.9% of cases, the occurrence of inflammatory eye pathology was one of the first clinical manifestations of chronic viral hepatitis.

3. In case of frequently recurring inflammatory eye diseases and/or dry eye syndrome in combination with insufficient effectiveness of standard therapy, the patient should undergo additional examination methods to exclude concomitant infection associated with chronic viral hepatitis B and C.

