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DYNAMICS OF ELECTROPHYSIOLOGICAL PARAMETERS AGAINST THE BACKGROUND OF COMPLEX TREATMENT OF GLAUCOMATOUS OPTIC NEUROPATHY

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ABSTRACT: Significant progress in the treatment of glaucoma over the past decade in the field of neuro-ophthalmology, however, glaucoma lesions with steady growth, still ranks second among the causes of blindness and low vision, second only to cataracts [1]. According to a statement by the World Health Organization, in 2017 the number of patients with glaucoma lesions of the optic nerve ranged from 60.5 to 105 million people. According to statistics, the number of patients with glaucoma lesions is most likely to double by 2030 [2].

KEYWORDS: Primary glaucoma, endonasal electrophoresis, neuro-ophthalmology, World Health Organization, clinical observation.

INTRODUCTION

According to domestic authors in Uzbekistan, the increase in the incidence of primary glaucoma among the population over 40 years old reaches 1.5-2.5%. Open-angle glaucoma occurs in 20.1% of cases, angle-closure glaucoma (CLG) in 29.9% of cases. In our Republic, according to D.M. Tuychibayeva (2004), the proportion of disability due to primary glaucoma is 14.8%, causing the second place in the structure of all primary visual disability. The number of patients with primary glaucoma who became blind in both eyes reached 4.5 million people, which was the reason for

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including this pathology in the WHO list of priority eye diseases (Global Initiative for the Elimination of Avoidable Blindness: action plan 2006-2011, WHO 2006) .

Aim of the study. To evaluate the effectiveness of endonasal electrophoresis in the complex therapy of glaucomatous optic neuropathy based on the dynamics of electrophysiological parameters.

MATERIALS AND RESEARCH METHODS

Under clinical observation were 80 (116 eyes) patients with glaucomatous optic neuropathy (GON) aged 40 to 78 years, of which 44 (55%) were women, 36 (45%) were men, with an established diagnosis of POAG and PACG II or Stage III under conditions of IOP compensation (21.3±3.2). IOP compensation was achieved by medical, laser and surgical methods. Depending on the treatment, the following representative groups were identified: control, I main and II main. The control, which included 20 patients, of which the number of men 12 (15%), and women 8 (10%). Patients in this group received conventional therapy. I main, which includes 30 patients. The number of men was 16 (20%), the number of women was also 14 (17.5%). The patients of this group, in addition to traditional therapy and Sol Retinalamini -2 ml No. 10, received Sol. Tanacani - 1 ml by endonasal electrophoresis on a galvanization apparatus Flow 1. II main, which includes 30 patients, the number of men was 16 (20%), the number of women was also 14 (17.5%). Patients in addition to traditional therapy and Sol Retinalamini -2 ml No. 10, endonasal electrophoresis, Statistical processing of the obtained data was carried out on a personal computer using the program “Statistica 8.0”. The study was conducted with the informed consent of the observed patients.

RESULTS AND DISCUSSIONS

The initial value of visual acuity and the total boundary of the peripheral visual field (CLPP) in all three groups in patients with GON varied within 0.07-0.3 with correction, depending on the stage of the disease, the average value of VA differed: stage II 0.19± 0.07 and stage III 0.10 ± 0.03, while GMPP varied within 345.89 ± 8.34 at stage II and 247.84 ± 8.68 at stage III. After the treatment, there was a significant positive trend a month after the treatment in the I main group, which amounted to 0.39±0.07 and was 2.1 times higher than the initial values in stage II and 2.6 times higher with an indicator of 0, 27 ± 0.07 at stage III ($p \leq 0.05$), then all indicators slightly decreased by the 3rd month of observation and stabilized by the 6th month, however, they had a low significance indicator, the GMPP increased significantly by 39.280 from 346.25 ±7.02 to

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385.53±12.27 (p≤0.05) in patients with stage II and at 300 C 248.33±9.94 to 278.33±8.33 (p≤0.05) in patients with stage III from baseline. Further analysis of the AHPPZ indicator showed that on the 3rd month after our treatment, AHPPZ continued to increase and reached maximum values, which amounted to 393.39±12.09 (p≤0.05) in stage II and 290.67±6, 51 (p≤0.05), and then by the 6th month, these indicators tended to moderately decrease, but nevertheless were higher than the initial values. The analysis of OH indicators in the II main group already on the 10th day after the course of treatment reached 0.37 ± 0.07 in stage II and 0.23 ± 0.07 in stage III, which was almost 2 times more than the initial values and continued significantly improve until the end of the 1st month of observation in patients with GON stage II and III, which amounted to 0.41±0.06 and 0.28±0.07, respectively (p≤0.05). It should be noted that during the 3-month follow-up, these indicators tended to be strictly stable and did not differ in any way from the indicators of the 1st month. However, by the 6th month, the OH of these patients had a low significance index with a moderate decrease, which amounted to 0.35±0.09 and 0.21±0.06 in groups II and III, respectively. It should be noted that by the end of the 1st month of follow-up, AHPPZ increased significantly by 46.980 from 347.67±7.75 to 394.65±8.8 (p≤0.01) in patients with stage II and by 46.80 s 246.1±8.2 to 292.9±7.5 (p≤0.01) in patients with stage III from baseline. Further analysis of the AHPPZ indicator showed that on the 3rd month after our treatment, AHPPZ continued to moderately increase and reached maximum values, which amounted to 397.15±9.2 (p≤0.01) at stage II and slightly decreased to 281, 15±7.4 (p≤0.05). By the 6th month of follow-up, AHPPZ tended to moderately decrease with low statistical significance from baseline values. There was also a positive trend in the control group by the 3rd month of follow-up with a statistically significant increase in AHPPZ both in stages II and III, but the VA indicators did not increase significantly.

CONCLUSIONS

The use of endonasal electrophoresis with the drug "Tanakan" in combination with transcutaneous electrical stimulation in the complex treatment of GON improves visual functions and prolongs the positive effect of the main treatment. The method of complex treatment proposed in the work will improve the efficiency of treatment of patients with compensated open-angle glaucoma, improve the prognosis for vision and the quality of rehabilitation measures.

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