**Features of optic nerve lesion among patients with acute orbital inflammation**

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**The scientific objective.** Acute orbital inflammation can cause blindness and intracranial complications. Nowadays pathogenesis of optic nerve lesion among patients with orbital cellulitis has not been studied enough.

**The method.** 84 patients (aged 14-79 years) with orbital cellulitis were supervised. Patients were divided into 4 groups depending on visual acuity during acute period of orbital inflammation. In the 1st group there were 5 patients with visual acuity 0,2-0,8. In the 2nd group there were 5 patients with visual acuity 0,01-0,04. In the 3d group there were 4 patients with blindness. In the control group there were 70 patients with visual acuity 0,9-1,0. Besides standard ophthalmological examination HCT and MRI with contrast (gadodiamid 0,5 mmol/l) were carried out.

**The results.** During acute period of orbital cellulitis among patients of the 1st group prominence in the vitreous and blurring of disc margins, widening of the retinal veins were recorded. The diameter of orbital part of optic nerve and of superior orbital vein did not differ at all comparing with the control group. Venous blood flow was symmetrical to the healthy side. After regression of the orbital inflammation complete recovery of visual function. During acute period of orbital cellulitis among patients of the 2nd group prominence in the vitreous, hyperemia and blurring of disc margins, considerable widening of the retinal veins were detected. The widening of orbital part of optic nerve 1,2 times and of superior orbital vein 1,9 times were marked. Venous blood flow was asymmetrical to the healthy side. After regression of the orbital inflammation there were partial recovery of visual acuity, concentric narrowing of the visual field, impaired color vision. During acute period of orbital cellulitis among patients of the 3nd group prominence in the vitreous, hyperemia and blurring of disc margins, considerable widening of the retinal veins were detected. The widening of orbital part of optic nerve 1,5 times and of superior orbital vein 2,8 times were marked. Venous blood flow was asymmetrical to the healthy side. There were no restoration of visual function among patients of the 3nd group towards the reduction of the inflammatory changes in the orbital cellular tissue.

**The conclusions.** Optic nerve lesion among patients with orbital cellulitis develops in the 16,7 % of cases. Intrabulbar and orbital parts of optic nerve are affected among these patients. Degree of visual function disturbance depending on level increase intraorbital pressure and rate widening of orbital part of optic nerve and superior orbital vein.