

Frequency of chronic infections with proven ocular tropism in patients with acute retinal necrosis (ID 56596)



V. Neroev, V.Tankovskii, G. Krichevskaya, D. Levina
Helmholtz Moscow Research Institute of Eye Diseases Russia

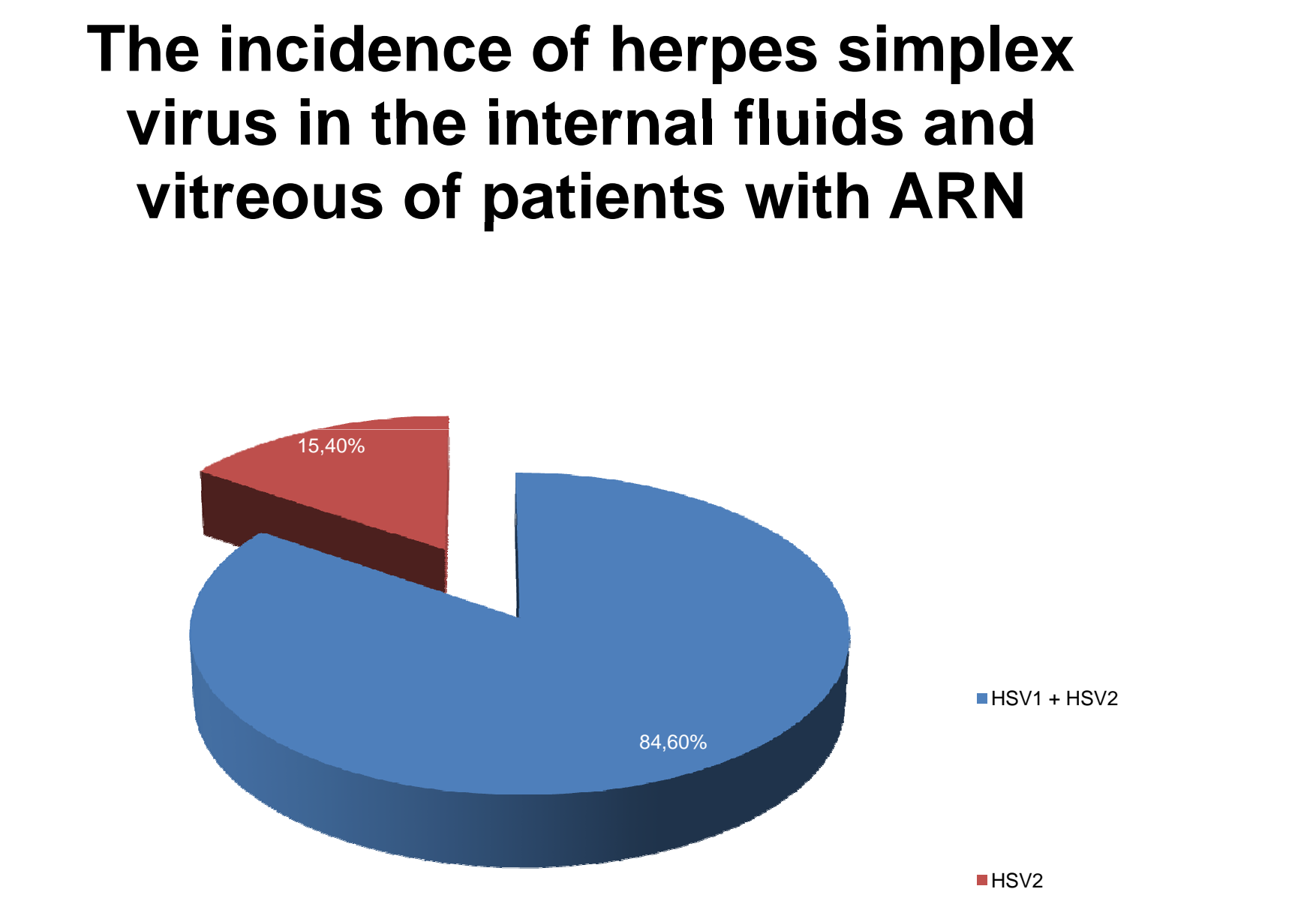
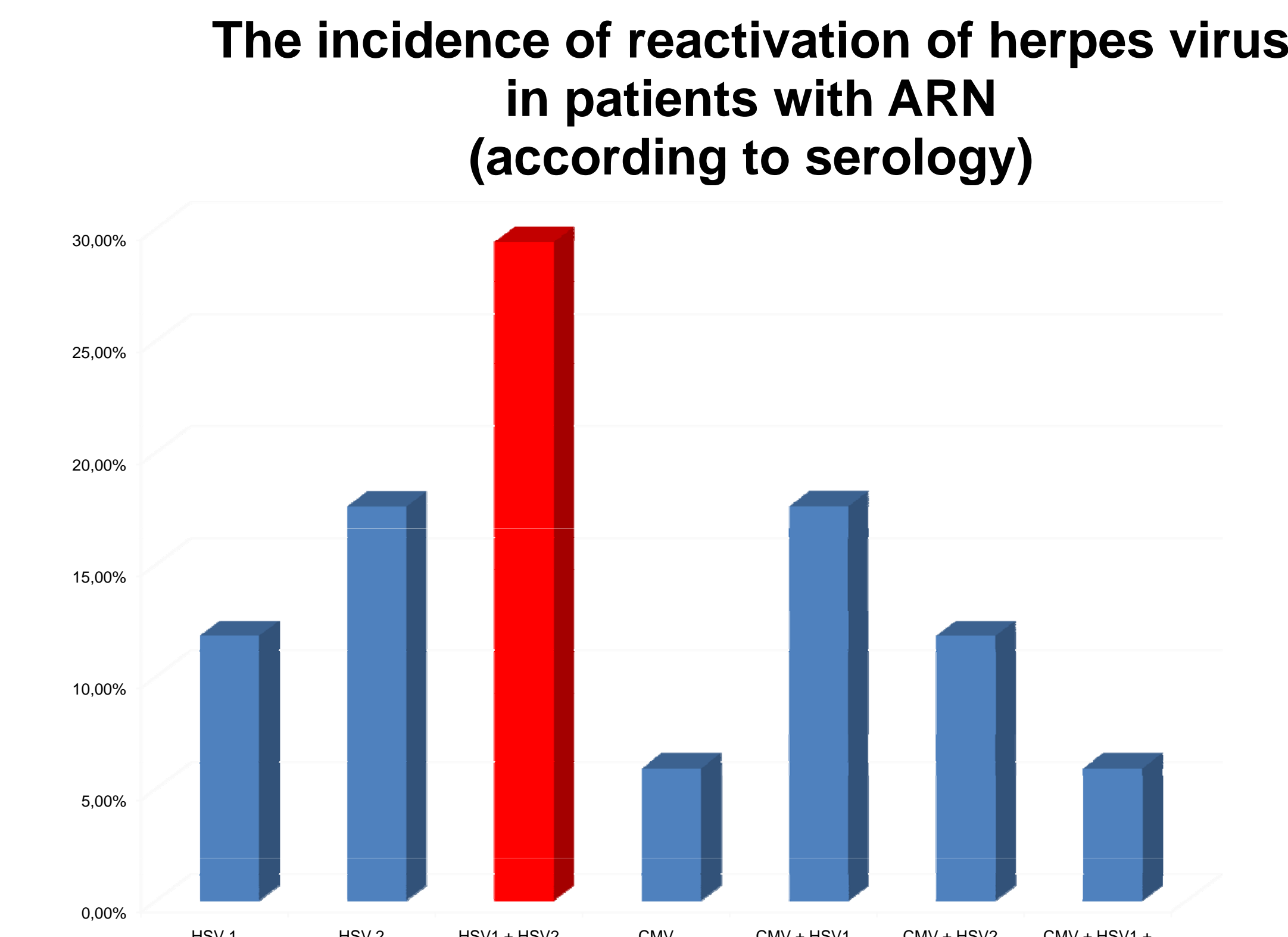
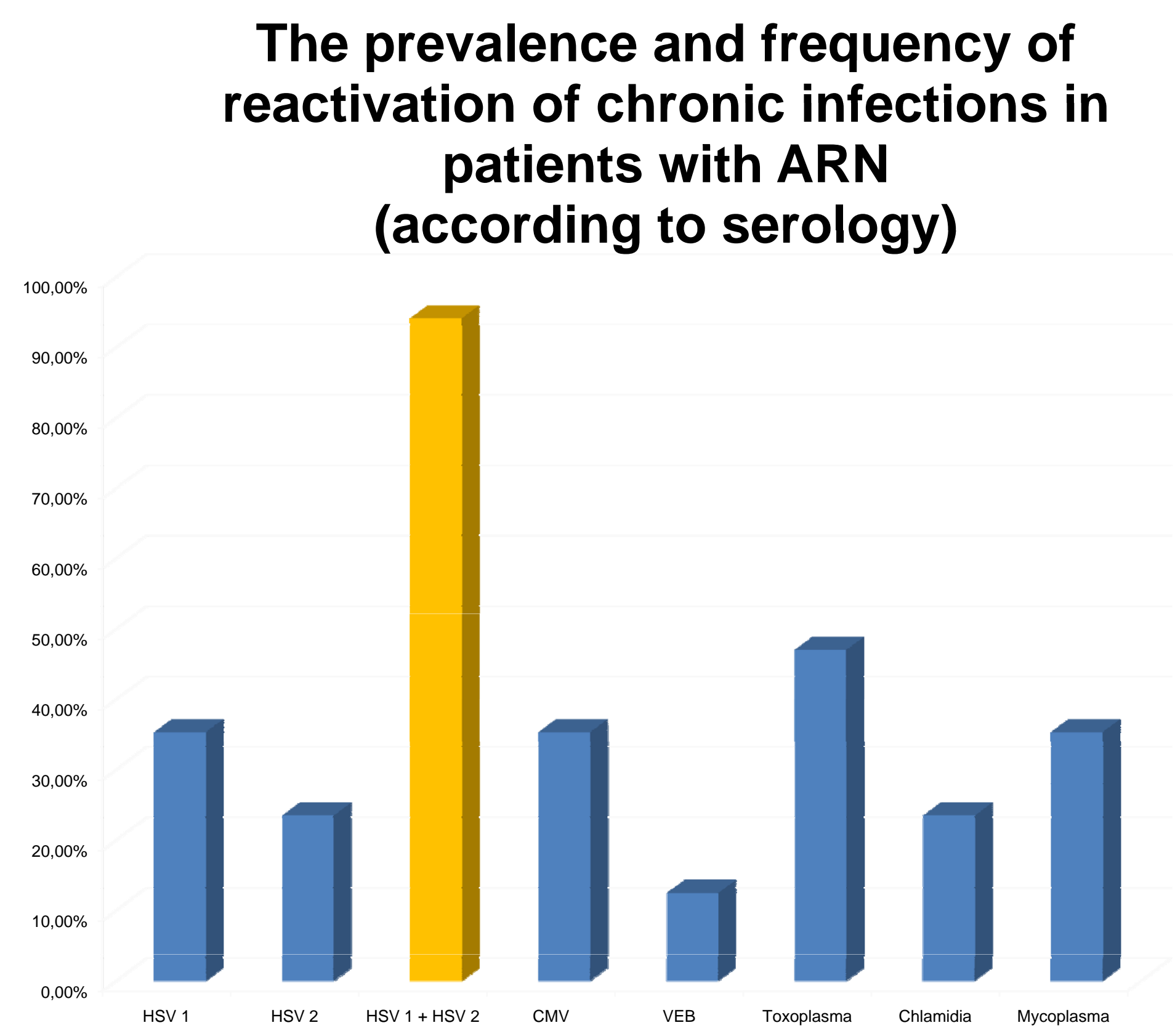
Financial interests: none

Purpose: to evaluate the frequency of chronic infections with proven ocular tropism in patients with acute retinal necrosis

Patients & Methods. 235 patient with uveitis. Acute retinal necrosis was detected in 8.9% (21 people - 12 males and 9 females) at the age from 21 to 72 (with mean age 42.3 years). In 61.9% inflammatory process was at both eyes, what is more the fellow eye loss has evolved in a period of 7 days to 5 years.

The enzyme-linked immunosorbent assay (ELISA) was performed on an automated immunoassay analyzer "Lapis", United States. Antibodies was determined to chronic infections with proven ocular tropism in blood serum, moisture of anterior chamber and the vitreous body. Real time RCR is a detection of nucleic acid (genome) pathogen in blood plasma and intraocular fluids. We used CFX96TM Real-Time System (BIO-RAD).

| AGENT | ANTIBODY |
|--|--------------------------|
| HERPES SIMPLEX VIRUS (HSV) 1 HERPES SIMPLEX VIRUS (HSV) 2 | IgM ab |
| | IgG – ab |
| | IgG- early ab |
| CYTOMEGALOVIRUS (CMV) | IgM – ab |
| | IgG - ab |
| | IgG- immediate- early ab |
| Epstein-Barr virus (EBV) | IgG- NA ab |
| | IgG- EA ab |
| | IgM-VCA ab |
| Toxoplasma gondii (T.g.) | IgM, IgG |
| Toxocara canis (T.c) | IgG |
| Chlamydia trachomatis (Ch.t) | IgM, IgA, IgG |
| Chlamydomphila pneumoniae (Ch. p) | IgM, IgG |
| Mycoplasma hominis (M.r.) | IgA, IgG |
| Ureaplasma urealyticum | IgA, IgG |



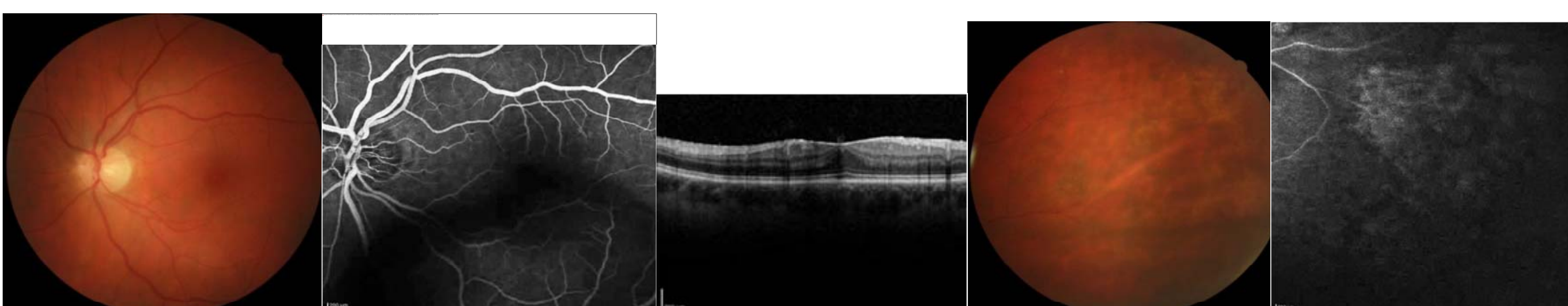
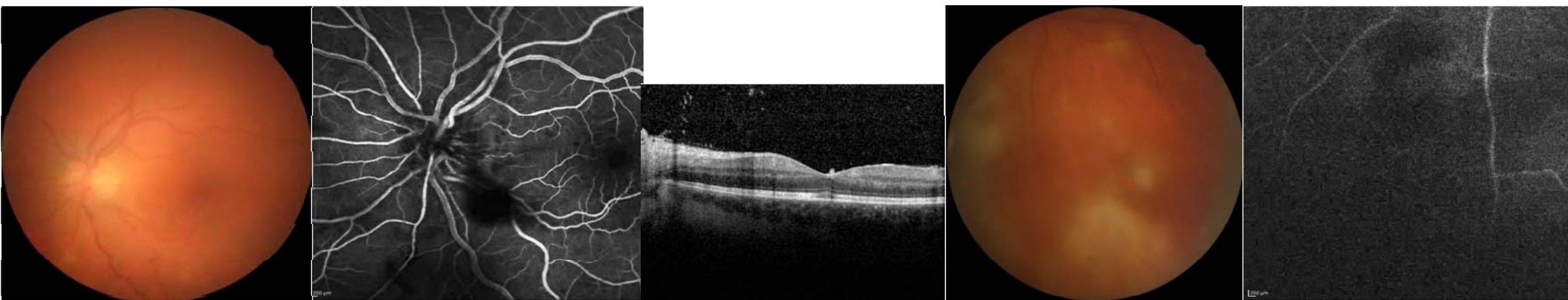
Results. In fact, the herpes simplex virus type 1, type 2 was detected in 100 % of patients, CMV in 35,3% and Epstein-Barr only 12,5%. Reactivation of herpes simplex virus type 1, type 2 was detected in 94.1% of the patients. Moreover the combination of reactivation of herpes simplex virus type 1 and herpes simplex virus type 2 was noted (29,4%). According to our data, all patients with ARN had a chronic infection with the herpes group - 47% in combination with toxoplasma, 23.5% - with chlamydia, 35.3% - with mycoplasma. The etiology of ARN was established at 61.1%. In the study of intraocular fluids and vitreous body was found that the overwhelming majority of patients (84.6%) had antibodies to herpes simplex virus type 1 and 2, and only 15.4% to herpes simplex virus type 2.

Conclusion. Acute retinal necrosis in almost all patients occurs against the backdrop of the reactivation of the herpes virus group, which confirms the necessity for systemic antiviral therapy.

Case: patient B., 42 years. Diagnosis: OS Acute retinal necrosis.

Before the treatment

After the treatment



| Infection | Serum antibodies | result | ELISA method (norm) |
|---------------------------|--|----------|---------------------|
| Herpes simplex virus 1, 2 | IgG | 3,21 | < 0,18 |
| | IgM | negative | < 0,31 |
| Herpes simplex virus 1 | IgG antibody to early antigen | 1,03 | < 0,35 |
| Herpes simplex virus 2 | IgG antibody to early antigen | negative | < 0,35 |
| Cytomegalovirus | IgG | 2,36 | < 0,36 |
| | IgM | 1,07 | < 0,35 |
| | IgG -antibody to immediate early antigen | negative | < 0,35 |
| Epstein-Barr virus | IgG - antibody to nuclear antigen | 3,29 | < 0,18 |
| | IgG - antibody to early antigen | 0,6 | < 0,28 |
| | IgM - antibody to capsid antigen | 0,51 | < 024 |
| | | | |

| Infection | Serum antibodies | result | ELISA method (norm) |
|---------------------------|--|----------|---------------------|
| Herpes simplex virus 1, 2 | IgG | 3,2 | < 0,19 |
| | IgM | negative | < 0,29 |
| Herpes simplex virus 1 | IgG antibody to early antigen | 0,5 | < 0,35 |
| Herpes simplex virus 2 | IgG antibody to early antigen | negative | < 0,35 |
| Cytomegalovirus | IgG | 0,6 | < 0,21 |
| | IgM | negative | < 0,37 |
| | IgG -antibody to immediate early antigen | negative | < 0,35 |
| Epstein-Barr virus | IgG - antibody to nuclear antigen | 3,3 | < 0,13 |
| | IgG - antibody to early antigen | 0,3 | < 0,27 |
| | IgM - antibody to capsid antigen | 0,4 | < 0,23 |
| | | | |

Comments. After the treatment process was locked. Thus, this example shows that prior to treatment the patient had evidence of reactivation of herpes group viruses, which regressed after systemic antiviral therapy.