PURPOSE: The comparison of thrombolysis using the tissue-plasminogen activator (rt-PA) with conservative standard treatment (CST) of retinal artery occlusion.

METHODS: Thrombolysis with rt-PA using 0.9 mg/kg of body weight. First 10% was injected as bolus and the rest was applied with a slow intravenous therapy during the next 60 minutes. CST- eye massages, acetozamid, topical beta-blockers, Pentoxiphyllin infusion, oxygenotherapy. 23 patients were monitored (age 50 – 86 years). First 13 were cured with rt-PA (2006 – 2009), next 10 with CST (2009 – 2011). 9 suffered from non-arteritic CRAO without cilioretinal artery sparing (CRAS), 8 from hemi-CRAO or BRAO, 5 from CRAO with CRAS and 1 patient had only cilioretinal artery occlusion in area of papilomacular bundle.

RESULTS: Thrombolysis was completely unsuccessful in the patients with non-arteritic CRAO without CRAS. BCVA improved in one patient of six when using SCT. Thrombolysis helped in two patients of three with CRAS and SCT helped to one of two patients with the same diagnosis. Central retina is damaged similarly in hemi-CRAO as in temporal branch occlusion. The state of 5 of 7 patients improved after rt-PA and one patient improved after SCT. One patient has only cilioretinal artery occlusion and its BCVA returned to normal after CST. All radically improved patients had BCVA before treatment at least 1/60.

CONCLUSION: The best BCVA results were in the groups of cilioretinal artery and hemi-CRAO/BRAO and also in patients with non-arteritic CRAO with CRAS. We did not prove a thrombolysis effect in patients with non-arteritic CRAO without CRAS.