The Central Vein Occlusion Study (CVOS): 1995

Objective

To investigate the utility of photocoagulation in the treatment of central vein occlusion

Methods

Design: Phase III Randomized Control Trial, multi-centered

Sample Size: 332 patients with CRVO in the past year

Treatment Groups:

Group N: Nonperfused and no neovascularization
- 78 to no treatment
- 77 to prophylactic PRP

Group M: Perfused macular edema VA ≤20/50
- 78 to no treatment
- 77 to macular grid photocoagulation

Outcome Measures:
- Development of Neovascularization (Group N)
- Mean change in BCVA (Group M)

Results

Point 1: Prophylactic PRP did not statistically significantly reduce the development of 2 clock hours of iris neovascularization or any angle neovascularization (TC-INV/ANV)
- Although it trended in that direction, the difference was not statistically significant (35% vs. 20%, OR 0.6, P = 0.17) after adjusting for baseline characteristics
- TC-INV/ANV development was positively correlated to retinal hemorrhage (P = 0.03) and retinal nonperfusion (P = 0.0001).
- TC-INV/ANV was more successfully treated by PRP in patients who had not had prophylactic PRP (56% vs. 22%, OR 4.5, P = 0.02)

Point 2: There was no statistically significant difference in visual acuity in those who received PRP versus those who received no treatment.
- Final visual acuity was 20/200 in those treated with photocoagulation and 20/160 in those who received no treatment
- However, treatment reduced angiographic evidence of macular edema

TLDR: The study did not support the use of prophylactic photocoagulation after CRVO

A randomized clinical trial of early panretinal photocoagulation for ischemic central vein occlusion. The Central Vein Occlusion Study Group N report. Ophthalmology. 1995;102(10):1434-1444.

Evaluation of grid pattern photocoagulation for macular edema in central vein occlusion. The Central Vein Occlusion Study Group M report. *Ophthalmology*. 1995;102(10):1425-1433.