



Treatment of ischaemic central retinal vein occlusion with prophylactic anti-VEGF injections reduces the risk of neovascular glaucoma, but careful long-term monitoring for ocular new vessels remains essential

The Science behind the Tip

Approximately 20% of central retinal vein occlusions (CRVO) are ischaemic and of those, 45% develop neovascular glaucoma, usually within 7-8 months of presentation. A NIH –funded study revealed that 42% of patients with an ischaemic CRVO developed new vessels on the iris or in the angle. Despite pan-retinal photocoagulation, 8.5% subsequently progressed to neovascular glaucoma¹.

In patients with CRVO injected at regular intervals over a 12-month period with aflibercept (Eylea) or bevacizumab (Avastin), none developed neovascular glaucoma over that time^{2,3}. However, in a retrospective study where a reduced dosing schedule of anti –VEGF therapy was used in patients with CRVO, 14% developed iris new vessels and 7% neovascular glaucoma, much later than expected (19.7 months after symptom onset)⁴. Careful long-term monitoring for ocular new vessels is essential even if these patients are receiving anti-VEGF therapy.

References

- 1) Clarkson JC. Natural history and clinical management of central retinal vein occlusion. Arch Ophthalmol 1997; 115: 486-491
- 2) Brown DM, Heier JS, Clark WL et al. Intravitreal aflibercept injection for macular oedema secondary to central retinal vein occlusion; 1-year results from the phase 3 COPERNICUS Study. Am J Ophthalmol 2013; 155: 429-437
- 3) Epstein DL, Algvere PV, von Wendt et al, Benefit from bevacizumab for macular oedema in central retinal vein occlusion: twelve month results of a prospective randomised study. Ophthalmology 2012; 119: 2587-91.
- 4) Ryu CL, Elfersy A, Desai U et al. The effect of antivascular endothelial growth factor therapy on the development of neovascular glaucoma after central retinal vein occlusion: a retrospective analysis J.Ophthalmol 2014; ID 317694.