Another aspect of NVG prevention is represented by treating the patients with central/hemi-CRVOs in whom ocular neovascularization already has appeared but IOP still remains within normal limits (eg, the preglaucomatous stage of NVG[2]). In such cases we administer IVB injections, topical steroids, and cycloplegics; unless the neovascularization subsides with these treatments, we promptly apply panretinal photocoagulation that may prevent or delay any developing of the intractable sight-threatening NVG.

In conclusion, we believe that at a dose of 2.5 mg injected promptly before occurrence of neovascularization and IOP elevation, IVB offers a real benefit and promise for the prevention of NVG in patients with acute central/hemi-CRVOs. Early diagnosis and treatment with bevacizumab are required in order to maintain a good visual status and a satisfactory IOP control.

Conflict of interest

The authors declare no conflict of interest.

Author contributions

Both authors (DC and MC) were involved in design and conduct of the study; collection, management, analysis and interpretation of the data; and preparation, review or approval of the manuscript.

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Sir,

Reply to 'Comment on: Long-term outcomes of neovascular glaucoma treated with and without intravitreal bevacizumab'

We thank Călugăru and Călugăru[1] for their constructive comments regarding our article 'Long-term outcomes of neovascular glaucoma treated with and without intravitreal bevacizumab'.[2] We appreciate their thoughts and their previous work on this topic.

In your letter, you have suggested our conclusion that bevacizumab acts only as a temporizing rather than a definitive treatment for neovascular glaucoma (NVG) is only valid in the fully developed (ie, complete angle closure glaucoma) stage of NVG. However, the large number of patients enrolled in our study represented all stages of NVG, including open angle and angle closure forms of NVG, although documentation of gonioscopy did not allow for sufficient analysis of the effect of bevacizumab on progressive angle closure in NVG.

With regards to central retinal vein occlusion, in the Central Vein Occlusion Study, the application of panretinal photocoagulation (PRP) before the development of any neovascularization of the iris (NVI) failed to demonstrate a statistically significant reduction in the incidence of NVI.[3,4] Although CVOS recommends waiting for the development of 2 clock hours of NVI as demonstrated by gonioscopic examination, current practice patterns, however, entail performing PRP upon the first evidence of NVI. In addition, our report focused on the treatment of patients who have already developed NVG (defined as intraocular pressure (IOP) > 21 mm Hg associated with NVI and/or neovascularization of anterior chamber angle), rather than prophylaxis to prevent NVG in patients with predisposing conditions, as was the case in your study.

Recently published results from the Diabetic Retinopathy Clinical Research Network Protocol S evaluated visual acuity outcomes in patients with proliferative diabetic retinopathy (PDR) treated with intravitreal ranibizumab compared with PRP over 2 years.[5] Intravitreal bevacizumab and ranibizumab are used interchangeably by many clinicians. The study demonstrated non-inferiority of repeatedly dosed intravitreal ranibizumab as compared with PRP. However, these results have yet to change practice patterns in PDR management, which involve PRP to eliminate the ischemic drive and induce regression of neovessels, given that in a clinical setting, a monthly injection dosing and/or monitoring schedule is impractical and costly. Loss to follow up could result in risk of vision loss from PDR and possibly NVG. In our opinion, the benefits of timely PRP outweigh the risks attributed to PRP, including peripheral field loss.

As discussed in our article, the effect of intravitreal bevacizumab (IVB) is temporary, and has been associated with recurrence of neovascularization due to its limited duration of action.[6–9] In a previous paper published by our group and entitled 'Outcomes of treatment of neovascular glaucoma with intravitreal bevacizumab', Kaplan–Meier analysis in Figure 3[10] revealed a linear increase in the cumulative proportion of NVG eyes

receiving a second IVB injection with time. The reason for repeated injections was most likely recurrent or persistent NVI and/or neovascularization of anterior chamber angle. In real world clinical experience, repeated injections translate into a higher risk of vision loss from NVG, because, while IVB inhibits human vascular endothelial growth factor (VEGF) temporarily, induces initial regression of neovascularization, and possibly decreases further neovessel formation and progressive angle closure, it does not, however, constitute a long-term solution for the underlying driving force behind NVG—ischemia. PRP is the only modality that definitively reduces or eliminates retinal ischemia, allowing for long-lasting control of the disease. In addition, despite the IVB-induced regression of NVI, vascular ghost vessels remain after regression of vessels visible on slit lamp or gonioscopy. These ghost vessel bodies close off areas of the trabecular meshwork and if recurrent over many times after repeated IVB injections, will eventually lead to progressive NVG and chronic angle closure by these ghost vessels in the angle.

We feel that more definitive treatment with prompt PRP and IVB *vs* repeated administration of IVB with close observation entails fewer patient visits, fewer complications associated with intravitreal injections (namely, endophthalmitis and retinal detachment, and albeit rare), and lower long-term cost to the patient. In addition, we prefer to treat the underlying cause and not treat only the consequences.

We suggested that patients with NVG can benefit from the early-onset antiangiogenic action of IVB and the long-lasting effect of PRP, particularly in patients with vitreous hemorrhage, where the administration of IVB can induce regression of the neovessels and hasten resolution of bleeding, allowing prompt PRP to be carried out. Furthermore, IVB administration may decrease the risk of intra- and postoperative bleeding in subsequent glaucoma drainage implant surgery, and may exert an anti-inflammatory activity with decreased vascular permeability (VEGF was originally identified as vascular permeability factor). We therefore recommend IVB administration to be part of the standard therapeutic regimen for NVG, but for clinicians to also recognize the importance of addressing retinal ischemia (the root cause of NVG) by timely and promptly performing PRP on NVG patients, when clinically feasible.

Conflict of interest

The authors declare no conflict of interest.

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Sir,
Comment on: 'Effectiveness of a smartphone application for testing near-visual acuity'

I read with interest the article Effectiveness of a smartphone application for testing near visual acuity.[1] Even though the results are interesting, I have a few concerns and comments. An analysis of the iPhone 5 limitations on displaying the optotype detail is required for discussing the results. If we consider the detail as the pixel size (PS), we can obtain the finest visual acuity (VA_{lim}) that a smartphone can display by the next equation,

$$VA = \frac{1}{\alpha'}; \alpha' = 60 \times \arctan\left(\frac{a}{d}\right); a = \frac{25.4}{DPI}; VA_{lim} = \frac{1}{60 \times \arctan\left(\frac{25.4}{DPI \cdot d}\right)}$$

where DPI is the dots per inch of the device, a is the PS, and d is the presentation distance (mm). Furthermore, PS does not only determines the VA_{lim} but also the