

Intravitreal bevacizumab monotherapy for treatment-naïve polypoidal choroidal vasculopathy

Dear Editor,

Polypoidal choroidal vasculopathy (PCV) is primarily a choroidal vascular disease, which can lead to acute severe visual loss secondary to massive submacular or vitreous hemorrhage.

Various treatment modalities, such as direct thermal laser photocoagulation, tissue plasminogen activator (t-PA) injection with gas displacement, submacular surgery and macular translocation surgery have been proposed. Photodynamic therapy (PDT) with verteporfin has shown good results for PCV, but extensive subretinal hemorrhages and exudation limits its application.^[1] Favorable results have been reported with combined therapy, including PDT and intravitreal bevacizumab (IVB), to treat PCV.^[2]

We evaluated nine eyes of eight patients with PCV

who were treated with IVB monotherapy. We excluded patients that had any previous treatment for PCV or wet age-related macular degeneration (AMD) in the study or contralateral eye.

All participants received a comprehensive ocular examination including digital fluorescein angiography (FA), indocyanine green angiography (ICGA) and optical coherence tomography (OCT) at baseline, and at 3-monthly interval visits

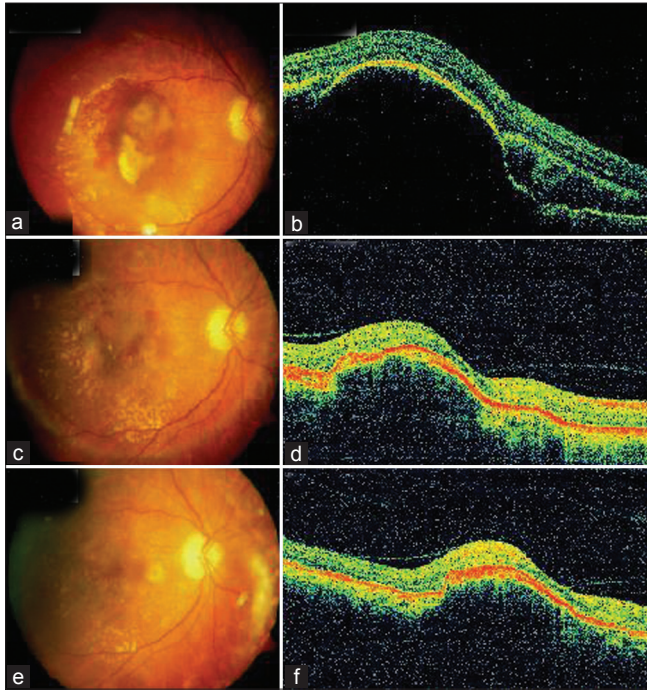


Figure 1: Fundus photo at baseline (a) shows hemorrhagic pigment epithelial detachment (PED) involving the fovea with subretinal hemorrhage. (b) (at 1-month follow-up) Reduction in the PED with decrease in subretinal hemorrhage. (c) (at 3-month follow-up) Disappearance of subretinal hemorrhage and PED. (d) OCT at baseline shows a PED with intraretinal cystic fluid at the edge of the PED. (e) (At 1-month follow-up) and (f) (at 3-month follow-up) Significant reduction in the height of the PED on OCT

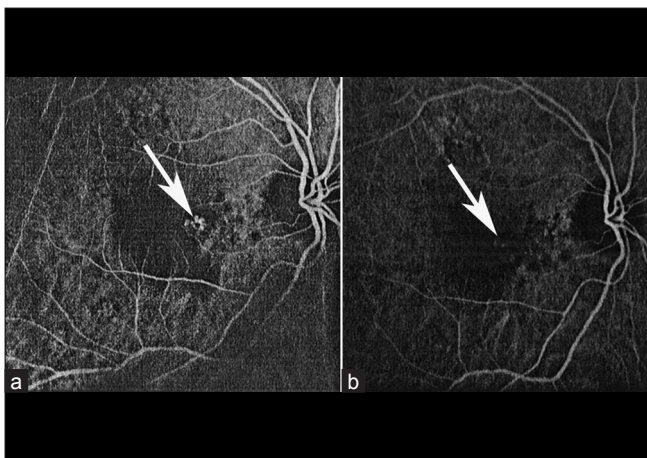


Figure 2: Indocyanine green angiographic images (a) before treatment and (b) 1 year after treatment, showing regression of polyps (arrows) after treatment

till last follow-up. IVB injection was performed as per standard protocol. Repeat treatment was performed every 4 weeks if the OCT showed persistent pigment epithelial detachment (PED)/subretinal fluid (SRF) or active polypoidal lesion on fundus fluorescein angiography (FFA)/ICGA.

The mean age was 60.6 years and 37.5% of the patients were female. At baseline, the median Snellen best corrected visual acuity (BCVA) was 20/2000 (range 20/30–20/10,000). The mean follow-up duration was 8.4 months (range 4–12 months).

All eyes showed resolution of subretinal hemorrhage, PED [Fig. 1] and angiographic activity [Fig. 2], but persistence of polypoidal lesion was noted in three eyes. At the last follow-up, the median Snellen BCVA was 20/100 (range 20/25–20/400). The mean log MAR BCVA showed a statistically significant improvement from 1.41 to 0.63 ($P = 0.04$). Seven (77.7%) eyes showed significant improvement in visual acuity, with mean number of line improvement of 6.5. The remaining two eyes maintained the baseline visual acuity till last follow-up. The mean number of injections was 2.3. The mean longest treatment-free period was 5.88 months. No significant systemic or ocular side-effects were observed in any of the eyes receiving IVB injections.

In our study, mean BCVA improvement of 2 or more lines was seen in 72% of the patients, and the remaining 28% showed a stabilization of visual acuity at mean follow-up of 8.4 months. Kokame *et al.*,^[3] reported stabilization of vision at 6 months, with monthly intravitreal injection of ranibizumab in PCV.

Lai *et al.*, reported stabilization of vision and reduction in exudative detachment with intravitreal bevacizumab, but a limited role in regression of polypoidal lesions in ICGA. Persistent lesions were treated with PDT.^[4] In our study, persistent lesions were closely followed-up, which did not bleed again during the follow-up. Complete regression of polypoidal lesion in ICGA may not be the therapeutic target, but close follow-up is mandatory.

In conclusion, our study demonstrated that IVB injection helps to improve or maintain the vision in patients with symptomatic treatment-naïve PCV.

**Jay Kumar Chhablani^{1,2}, Ritesh Narula¹,
Raja Narayanan¹**

¹Smt. Kanuri Santhamma Retina Vitreous Service, L V Prasad Eye Institute, Hyderabad, India, ²Shiley eye center, University of California, San Diego, USA,

Address for correspondence: Dr. Raja Narayanan, Smt. Kanuri Santhamma Retina Vitreous Service, L.V. Prasad Eye Institute, Kallam Anji Reddy Campus, Banjara Hills, Hyderabad-500 034, India. E-mail: narayanan@lvpei.org

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