Intravitreal bevacizumab for parafoveal telangiectasia-associated choroidal neovascular membrane

Dear Editor,

Parafoveal telangiectasia type IIA (PFT IIA) is characterized by abnormal retinal capillaries, graying of parafoveal retina, and right-angled venule configuration. It can be complicated by growth of choroidal neovascular membrane (CNVM), exudation, and hemorrhage. Intravitreal bevacizumab has been used successfully to treat PFT-associated subretinal fluid and we report its use in treating CNVM associated with PFT IIA.[1,2]

A 52-year-old diabetic lady, presented with two weeks' history of decreased vision and metamorphopsia in her left eye. She had noticed metamorphopsia in her right eye 10 years back, following which she developed a central scotoma.

Her best-corrected Snellen vision in the right eye was 20/200, N24 and 20/80, N36 in the left eye. Both eyes had nuclear sclerotic cataract and normal intraocular pressure. The right fundus showed a pigmented, subretinal fibrotic scar with retinochoroidal anastomosis and a large area of RPE atrophy extending beyond the scar.

The left fundus showed whitening of perifoveal retina, with intraretinal hemorrhage. There was a well-defined subretinal yellow-white CNVM associated with subretinal fluid involving the temporal part of the lesion. Fundus fluorescein angiography (FFA) of the left eye showed dilated parafoveal telangiectatic capillaries and late ill-defined intraretinal dye leakage, with evidence of retinochoroidal anastomosis suggestive of PFT. Intense hyperfluorescence with active dye leakage confirmed the presence of CNVM involving the temporal part of the PFT lesion [Fig. 1]. FFA of the right eye showed staining of the scar, with RPE window defects.

After discussing various treatment options and obtaining informed consent, intravitreal bevacizumab (Roche, Switzerland) 1.25 mg in 0.05 ml was administered into her left eye.

One month post-bevacizumab, her left eye vision improved to 20/60 N6, with resorption of subretinal fluid. Optical coherence tomography (OCT) of the left eye confirmed the same. The intraretinal cystic spaces associated with PFT had also resolved [Fig. 2].

Her vision improved further to 20/30, N6, 2 months after intravitreal bevacizumab and remained at this level at last

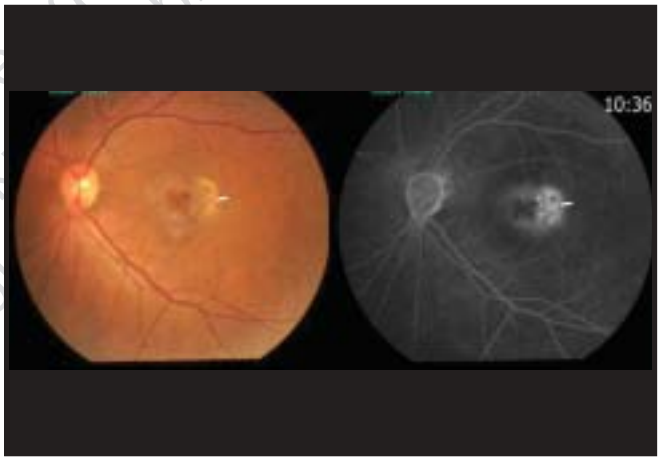

Figure 1: Fundus photograph of the left eye showing whitening of perifoveal retina with intraretinal hemorrhage and CNVM temporally (arrow). Late-phase fluorescein angiography shows leakage from telangiectasia and intense leakage from the CNVM (arrow)

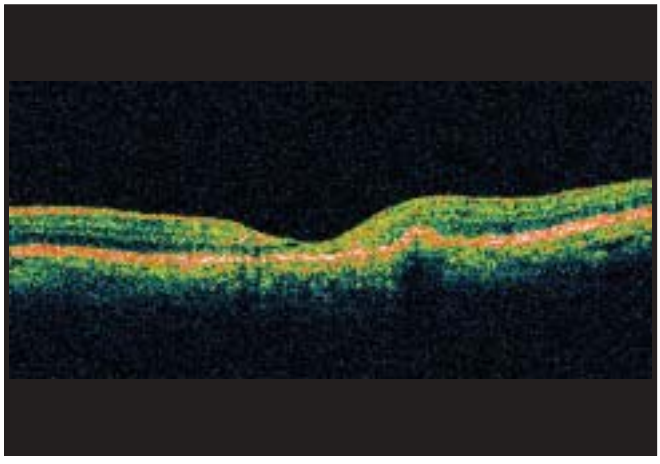

Figure 2: Oblique OCT scan one month post-bevacizumab shows absence of subretinal fluid, nodular elevation at the level of the retinal pigment epithelium corresponding to the CNVM, and one intraretinal cyst

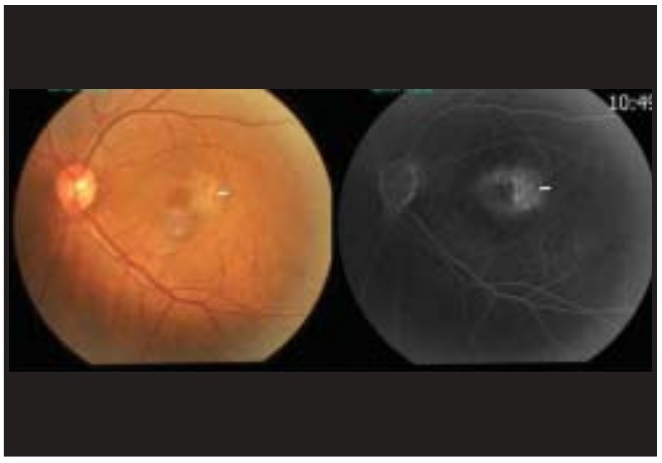

Figure 3: Six months post-intravitreal bevacizumab, the fundus photograph shows absorbed intraretinal hemorrhage and attenuated CNVM. Late-phase fluorescein angiogram shows absence of leakage from the CNVM and leakage from telangiectatic vessels

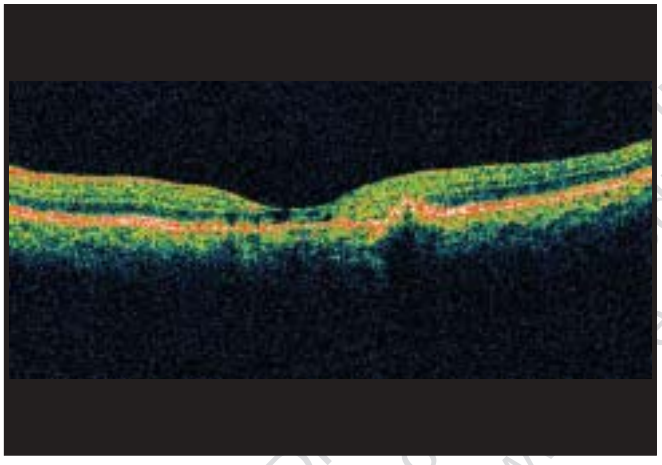

Figure 4: Oblique OCT scan 6 months after intravitreal bevacizumab shows recurrence of intraretinal cysts but no subretinal fluid

follow-up 6 months later. FFA performed at 6 months showed minimal leakage from the telangiectatic vessels but no active leak from the CNVM [Fig. 3]. OCT showed recurrence of intraretinal cystic spaces but no subretinal fluid [Fig. 4].

Treatment options for CNVM complicating PFT include laser photocoagulation, intravitreal triamcinolone acetate, submacular surgery, transpupillary thermotherapy (TTT), and photodynamic therapy (PDT).[3]

Laser photocoagulation of extrafoveal CNVM complicating PFT will result in a scotoma close to fixation; TTT is nonselective and causes some degree of RPE and retinal damage; while submacular surgery generally resulted in poor post-treatment visual outcome.[4]

PDT for CNVM complicating PFT may cause inadvertent RPE damage corresponding to the laser spot, thereby compromising visual recovery.[5]

Vascular endothelial growth factor (VEGF) has been implicated as the major angiogenic stimulus responsible for neovascularization in PFT, thereby suggesting a role for anti-VEGF treatment in these patients.[6] In our patient, the CNVM responded well, over a 6 month period, to a single injection of intravitreal bevacizumab, but leakage from PFT showed signs of recurring activity. Repeating anti-VEGF injection may have a long-lasting effect on leakage from PFT as well.

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