

Ziemssen et al.⁵ reported on a bevacizumab–PDT combination for a juxtapapillary capillary hemangioma. They were successful in achieving marked tumour regression and visual improvement with no complications and we believe a similar approach might be of benefit in cases of extrapapillary large lesions in which there is a risk of marked exudation.

In conclusion, we describe a significant exudative response following PDT of a peripheral retinal capillary hemangioma.

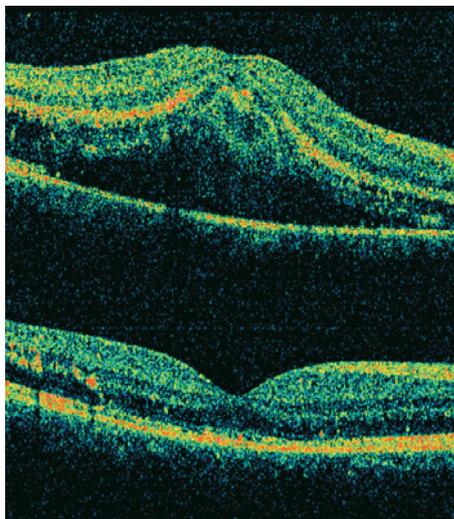


Fig. 3—Optical coherence tomography scans through the macula at 1 week and 3 months post photodynamic therapy showing the resolution of subretinal fluid.

Further studies are required to develop an appropriate treatment regimen for this challenging problem.

REFERENCES

1. Atebara NH. Retinal capillary hemangioma treated with verteporfin photodynamic therapy. *Am J Ophthalmol* 2002; 134:788–90.
2. Aaberg TM Jr, Aaberg TM Sr, Martin DF, Gilman JP, Myles R. Three cases of large retinal capillary hemangiomas treated with verteporfin and photodynamic therapy. *Arch Ophthalmol* 2005;123:328–32.
3. Szabó A, Géhl Z, Seres A. Photodynamic (verteporfin) therapy for retinal capillary haemangioma, with monitoring of feeder and draining blood vessel diameters. *Acta Ophthalmol Scand* 2005;83:512–3.
4. Arnold JJ, Blinder KJ, Bressler NM, et al. Acute severe visual acuity decrease after photodynamic therapy with verteporfin: case reports from randomized clinical trials—TAP and VIP report no. 3. *Am J Ophthalmol* 2004;137:683–96.
5. Ziemssen F, Voelker M, Inhoffen W, Bartz-Schmidt KU, Gelissen F. Combined treatment of a juxtapapillary retinal capillary haemangioma with intravitreal bevacizumab and photodynamic therapy. *Eye* 2007;21:1125–6.

*Yuen M. Wong, Assad Jalil, John Mathews,
Paulo E. Stanga*

Manchester Royal Eye Hospital, Manchester, U.K.

*Correspondence to Paulo E. Stanga, FRCOphth:
retinaspecialist@briinternet.com*

Can J Ophthalmol 2010;45:299–300
doi:10.3129/i09-258

Intravitreal ranibizumab in the treatment of choroidal neovascular membrane secondary to punctate inner choroidopathy

Punctate inner choroidopathy is a rare, idiopathic posterior uveitis that usually develops in young, myopic females. Choroidal neovascularization (CNV) and subretinal fibrosis are common complications in patients with punctate inner choroidopathy and are the major cause of vision loss.¹ Treatment options for secondary CNV include systemic and intraocular steroids, photocoagulation, photodynamic therapy, and subretinal surgery. More recently, intravitreal bevacizumab, an antivascular endothelial growth factor (anti-VEGF) agent, has been described with beneficial results.^{2,3} For the first time, we report the effectiveness of ranibizumab in the management of CNV associated with punctate inner choroidopathy.

A healthy, 30-year-old female presented with 1 month of blurred central vision OD. She wore rigid gas permeable contact lenses for myopia. Best-corrected visual acuity (BCVA) was counting fingers OD and 20/20 OS. Exami-

nation of the anterior segment was unremarkable. Examination of the right fundus revealed a yellow, raised, choroidal lesion nasal to the fovea and 3 flat, small, choroidal macular lesions. Nasal to the optic disc were multiple pigmented and nonpigmented, punched-out lesions extending from 12:30 to 5:00 o'clock in a circumferential distribution. Vitritis was absent bilaterally. Fluorescein angiography confirmed a juxtafoveal choroidal neovascular membrane (Fig. 1).

The patient's condition was diagnosed as punctate inner choroidopathy complicated by CNV. After discussion of the risks and benefits, the patient consented to an intravitreal injection of ranibizumab 0.5 mg to the right eye. One month later, the BCVA had improved to 20/400, and optical coherence tomography (OCT) revealed no subretinal fluid. Eight months after injection, the BCVA improved to 20/200 with further retraction of the macular scar as noted on clinical examination and fluorescein angiography (Fig. 2).

Although photocoagulation, photodynamic therapy, steroids, and surgery are viable options in the management

of CNV secondary to punctate inner choroidopathy, there is currently no consensus on the optimal treatment. In the absence of any significant inflammation, we elected to proceed with an anti-VEGF agent. The use of bevacizumab has had encouraging results and lacks the side effect profile of systemic and intraocular steroids.^{2,3} However, bevacizumab is not approved for use in the eye and is currently used off-

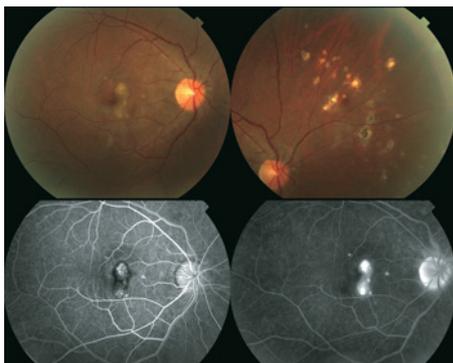


Fig. 1—Clinical photographs showing a choroidal neovascular membrane in the macula of the right eye and punched-out chorioretinal lesions in the retinal periphery nasal to the optic disc. Fluorescein angiography confirms a juxtafoveal choroidal neovascular membrane that is hyperfluorescent in the early phases and demonstrates leakage in the later phases of the angiogram.



Fig. 2—Clinical photograph of fundus of the right eye 8 months after intravitreal injection with ranibizumab. Note the retraction of the scar and normal foveal reflex. Fluorescein angiography demonstrates staining of the retracted scar with no evidence of leakage.

label as an intravitreal injection. Ranibizumab has been approved for use in exudative age-related macular degeneration and has been used for other causes of CNV, such as angioid streaks and multifocal choroiditis.^{4,5} However, its use in punctate inner choroidopathy has never been described as far as we are aware. We illustrate one such case with this condition and CNV that has responded positively to a single injection of ranibizumab with an improvement in visual acuity and a reduction in the size of the macular scar over 8 months. While other reports used 3 monthly injections of bevacizumab, we used only 1 injection with the intention of administering additional injections as needed on the basis of the clinical examination or OCT. This case report demonstrates that ranibizumab may be considered as a primary treatment option in the management of CNV associated with punctate inner choroidopathy. However, further follow-up is necessary to determine whether this response will be sustained and whether further injections are required.

REFERENCES

1. Gerstenblith AT, Thorne JE, Sobrin L, et al. Punctate inner choroidopathy: a survey analysis of 77 persons. *Ophthalmology* 2007;114:1201–4.
2. Vossmerbaeumer U, Spandau UH, V Baltz S, Wickenhaeuser A, Jonas JB. Intravitreal bevacizumab for choroidal neovascularisation secondary to punctate inner choroidopathy. *Clin Experiment Ophthalmol* 2008;36:292–4.
3. Chan WM, Lai TY, Liu DT, Lam DS. Intravitreal bevacizumab (Avastin) for choroidal neovascularization secondary to central serous chorioretinopathy, secondary to punctate inner choroidopathy, or of idiopathic origin. *Am J Ophthalmol* 2007;143:977–83.
4. Bhatnagar P, Freund KB, Spaide RF, et al. Intravitreal bevacizumab for the management of choroidal neovascularization in pseudoxanthoma elasticum. *Retina* 2007;27:897–902.
5. Fine HF, Zhitomirsky I, Freund KB, et al. Bevacizumab (Avastin) and ranibizumab (Lucentis) for choroidal neovascularization in multifocal choroiditis. *Retina* 2009;29:8–12.

Andrea K. Leung, Daniel J. Weisbrod, Carol Schwartz
Department of Ophthalmology and Vision Sciences, Sunnybrook Health Sciences Centre, University of Toronto, Toronto, Ont.

Correspondence to Carol Schwartz, MD: eyecu@rogers.com

Can J Ophthalmol 2010;45:300–1
doi:10.3129/i09-253