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### Sir, Response to Nesmith *et al*

We thank Nesmith *et al*<sup>1</sup> for their interesting report of anatomical and functional benefit of intravitreal bevacizumab in the treatment of macular edema in a probable case of Purtscher-like retinopathy. The case reported respects the majority of the diagnostic criteria of Purtscher or Purtscher-like retinopathies suggested by Agrawal<sup>2</sup> and adapted by us,<sup>3</sup> namely:

- Retinal hemorrhages, in the posterior pole, in small number (1–10).
- Cotton wool spots restricted to the posterior pole.
- Probable or plausible explanatory etiology (chronic pancreatitis, hepatitis C, cirrhosis, and typical presentation).
- Compatible complementary investigation (characteristic funduscopy, OCT revealing macular edema, and increased C5a).
- The presence of Purtscher flecken<sup>4</sup> is another diagnostic criterion (in this case there were none visible). Purtscher flecken are considered pathognomonic<sup>4</sup> and occur in 63% of Purtscher and Purtscher-like retinopathies (PuR).<sup>3</sup>

Nesmith *et al* report the first case of PuR with improvement of visual acuity, fundoscopic signs, and macular edema after the injection of intravitreal bevacizumab. Anti-VEGF agents may be of value considering PuR's proposed pathological mechanisms, namely in endothelial dysregulation<sup>5</sup> and in precapillary arterioles' occlusion with altered retinal microvascular permeability.<sup>6</sup>

However, there must be caution before concluding that bevacizumab is useful in PuR because spontaneous improvement is frequent. In a systematic review regarding Purtscher and Purtscher-like retinopathies,<sup>3</sup> we identified improvement of visual acuity in PuR

patients without treatment (there was no statistically significant difference between visual acuity improvement in patients receiving corticosteroids *vs* no corticosteroids), as well as improvement in OCT findings in 63% of the patients, as normalization of the fundoscopic signs in 40% of the patients with PuR. Observation and treatment of the underlying etiology may continue to be the most reasonable therapeutic option at the moment.

In conclusion, further studies should be performed to ascertain whether there is real benefit in performing a treatment with intravitreal bevacizumab. In fact, an international multicentered trial (given the low incidence of this pathology<sup>7</sup>) with different treatment arm groups should be initiated, comparing sham injection, intravitreal bevacizumab injection, corticosteroid use, and observation alone.

### Conflict of interest

The authors declare no conflict of interest.

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