

Sir,
**Anti-VEGF (vascular endothelial growth factor) drugs
in diabetic macular oedema**

I read the article by Forte *et al*¹ with interest. I congratulate the authors for evaluating different treatment options in diabetic macular oedema (DME).

I would like to comment about the treatment of DME with intravitreal bevacizumab (IVB) alone. The half-life of IVB in the vitreous cavity of a rabbit eye has been shown to be 4.32 days.² Most *in-vivo* studies have shown that IVB either plateaus or decreases macular thickness in most eyes between 3–6 weeks. This demands a need for repeat injections.

According to Parravano *et al*,³ multiple studies have shown only short-term benefit of anti-VEGF (vascular endothelial growth factor) drugs as compared with present treatment modalities. There is no sufficient high-quality evidence from large randomized controlled trials supporting the use of either single or multiple anti-VEGF intravitreal injections to treat DME.

The systemic safety of IVB is not yet established. Bevacizumab has the potential to inhibit the important physiological functions of VEGF, such as wound healing and development of collaterals deemed significant in myocardial or peripheral ischaemia, thus potentially causing systemic adverse events.⁴

Regarding intravitreal steroid as an adjunct has also shown a temporary effect on macular oedema, with no long-term benefit on visual acuity, but being associated with side effects. The studies have not shown any additional benefit of intravitreal steroid over laser photocoagulation.⁵

In conclusion, anti-VEGF or steroid can be used in gross macular oedema as an adjunct for short-term benefit, to reduce the macular thickness, followed by focal or grid laser to give a sustained response. Macular laser photocoagulation is still the gold-standard treatment. Multi-centre controlled trials are needed to compare IVB alone and in combination with laser photocoagulation in DME, to assess the long-term benefit and safety, the number of injections needed for maintenance of the effect, and the associated risk.

Conflict of interest

The author declares no conflict of interest.

References

- 1 Forte R, Cennamo GL, Finelli M, Farese E, D'Amico G, Nicoletti G *et al*. Intravitreal bevacizumab vs intravitreal triamcinolone combined with macular laser grid for diffuse diabetic macular oedema. *Eye* 2010; **24**(8): 1325–1330.
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Sir,
Reply to Chhablani

We thank Dr Chhablani¹ for his interest in our article²; we evaluated diffuse diabetic macular oedema and obtained good functional and anatomic results during a follow-up of 12 months after treatment with intravitreal bevacizumab, when compared with the combination of intravitreal triamcinolone and laser photocoagulation. We agree that intravitreal bevacizumab lacks in large randomized controlled trials and could be used in case of gross macular oedema in order to reduce macular thickening, followed by laser photocoagulation. The latter remains indeed the gold standard for diabetic macular oedema.

Conflict of interest

The authors declare no conflict of interest.

References

- 1 Chhablani JK. Anti-VEGF (vascular endothelial growth factor) drugs in diabetic macular oedema. *Eye* 2011; **25**(2): 254.
- 2 Forte R, Cennamo GL, Finelli M, Farese E, D'Amico G, Nicoletti G *et al*. Intravitreal bevacizumab vs intravitreal triamcinolone combined with macular laser grid for diffuse diabetic macular oedema. *Eye* 2010; **24**(8): 1325–1330.

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Sir,
Reply to Yip *et al*

We read with great interest the paper by Yip *et al*¹ concluding that laser peripheral iridotomy (LPI) for