CASE REPORT

Anti-VEGF therapy in a silicone oil-filled myopic eye with choroidal neovascularisation

Jay Chhablani, Raja Narayanan

Department of Retina, LV
Prasad Eye Institute,
Hyderabad, India

Correspondence to
Dr Raja Narayanan,
narayanan@lvpei.org

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SUMMARY

A 33-year-old man presented with vision loss in his right eye due to rhegmatogenous retinal detachment, for which he underwent pars plana vitrectomy with silicone oil injection. Three months later, the patient presented with sudden vision loss. On examination, his visual acuity was 20/200 with presence of subretinal haemorrhage with attached retina and silicone oil in situ. Fluorescein angiography confirmed the diagnosis of choroidal neovascularisation (CNV). The patient underwent intravitreal ranibizumab injection (0.5 mg per 0.05 mL). He subsequently underwent oil removal along with intravitreal bevacizumab injection (1.25 mg per 0.05 mL). The CNV completely regressed. At 7 years follow-up, the patient's best corrected visual acuity was 20/50 with attached retina and macular scar due to regressed CNV. His other eye was within normal limits throughout the follow-up period. This unique case demonstrates the successful outcome of intravitreal ranibizumab injection in a silicone oil-filled eye with myopic CNV.

are few case reports of treatment outcome of anti-vascular endothelial growth factor (VEGF) therapy for myopic CNV in an oil-filled eye.

CASE PRESENTATION

A 33-year-old man presented with vision loss in his right eye due to retinal detachment, for which he underwent vitrectomy and silicone oil injection. Three months later, he presented with sudden vision loss in the operated eye. On examination, his visual acuity was 20/200 with presence of subretinal haemorrhage (figure 1) with attached retina and silicone oil in situ.

INVESTIGATIONS

Fluorescein angiography and optical coherence tomography confirmed the diagnosis of CNV.

TREATMENT

The patient underwent intravitreal ranibizumab injection (0.5 mg per 0.05 mL). The CNV completely regressed.

BACKGROUND

The appearance of choroidal neovascularisation (CNV) is rare in silicone oil-filled eyes and there

Figure 1 A colour photograph of the fundus (A) at baseline showing subretinal haem (thick arrow) with suspicious choroidal neovascular membrane (arrow) and silicone oil reflex (arrowheads). Fluorescein angiography showing early hypofluorescence (C, thick arrow) and mild increase in hyperfluorescence in late phase (D, thick arrow). A colour photograph of the fundus (B) at last follow-up showing scarred choroidal neovascular membrane (arrowhead) with presence of epiretinal membrane (arrow) on optical coherence tomography scan (E).

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OUTCOME AND FOLLOW-UP

At 1-month follow-up, the patient's visual acuity improved to 20/160. He underwent oil removal along with intravitreal bevacizumab injection (1.25 mg per 0.05 mL) at the end of surgery. At 3 months' follow-up, his visual acuity improved to 20/50, which was maintained at 7 years' follow-up. There were no complications such as elevation of intraocular pressure during follow-up (figure 1). The other eye was within normal limits throughout the follow-up period.

Learning points

- ▶ Choroidal neovascularisation (CNV) could be a cause of vision loss in a silicone oil-filled eye.
- ▶ Anti-vascular endothelial growth factor (VEGF) therapy is safe and effective for myopic CNV in an oil-filled eye.
- ▶ During long-term follow-up, no clinical toxicity was noted with a standard dose (0.5 mg in 0.05 mL) of intravitreal ranibizumab in an oil-filled eye.

DISCUSSION

Cascavilla *et al*¹ reported successful treatment outcome after intravitreal ranibizumab in a myopic CNV in an oil-filled eye after retinal detachment repair. Intra-silicone oil bevacizumab has been used for neovascular glaucoma with diabetic retinopathy.^{2 3} Animal studies report the same half-life of intravitreal bevacizumab in oil-filled eyes as that in non-vitrecomised eyes. However, the peak concentration could be delayed in oil-filled eyes.⁴

Contributors Both authors have contributed in reviewing the literature, collection of data and writing up the case report.

Competing interests None.

Patient consent Obtained.

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