Sir, Intravitreal ranibizumab for choroidal neovascularisation secondary to angioid streaks

Angioid streaks represent breaks in the abnormally brittle Bruch's membrane, which cause one of the most serious complications, choroidal neovascularisation (CNV). Treatment of subfoveal CNV has been attempted, most commonly with photodynamic therapy (PDT) and recently with the antivascular endothelial growth factor (VEGF), bevacizumab. The effectiveness of PDT remains questionable, with most eyes showing poor visual outcomes,1 but the effectiveness of bevacizumab is promising with most eyes maintaining visual acuity (VA).^{2,3} We report a case of angioid streaks in both eyes.

One eye previously treated with PDT failed to maintain vision, but the other eye was successfully treated with another anti-VEGF, ranibizumab.

Case report

This case is based on a 49-year-old woman with a sudden decrease in the right VA. Her VA was 20/80 in the right eye and 20/400 in the left eye. Fundus examination showed angioid streaks in both eyes. There was no systemic association. A lesion suspected of being a CNV was seen in foveal area of the right eye (Figure 1a) and old disciform scar in the left eye (Figure 1b). Two years ago, her left eye had been treated with PDT twice but showed further deterioration. Fluorescein angiography (FA) showed subfoveal leakage consistent with occult CNV in the right eye (Figure 1c).

After informed consent was obtained, ranibizumab was administered consecutively for the first 3 months, and then administered an additional dose on the fifth month. After four intravitreal injections of ranibizumab, VA improved to 20/30 with no leakage on FA and with the resolution of macular oedema (Figure 1d). Since then, VA has remained stable for 1 year after the treatments with no additional intervention.

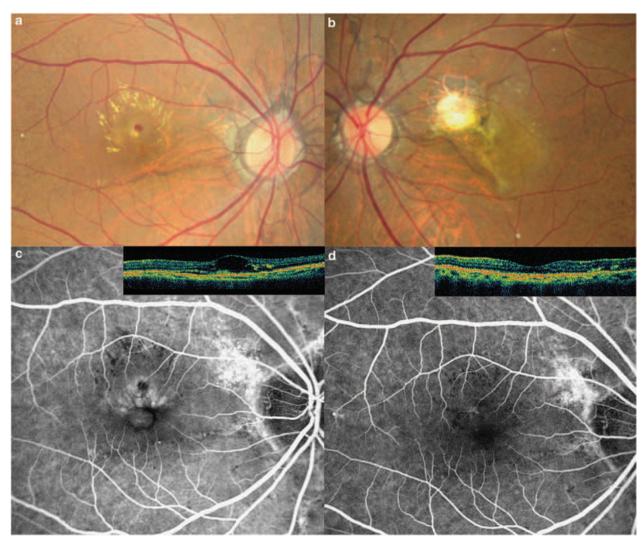


Figure 1 (a) Colour fundus photograph shows angioid streaks and newly developed subfoveal CNV; (b) Fundus photograph shows old disciform scar in the left eye, which had been previously treated with PDT twice; (c) FA and optical coherence tomography (OCT) show subfoveal leakage and macular oedema before ranibizumab injection; (d) FA and OCT show the resolution of macular oedema after four intravitreal injections of ranibizumab.

Comment

Recently, anti-VEGF therapies, using bevacizumab or ranibizumab, show favourable results in CNV to various underlying diseases.^{2–5} However, there has been no report treated with ranibizumab in angioid streaks. In our case, though the left eye treated with PDT showed disappointing results, the VA of the right eye treated with ranibizumab has been stable for 1 year after treatments. We think that the treatment of CNV in angioid streaks with ranibizumab is also promising and encouraging therapy, which merits further investigations.

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Eue (2009) 23, 1750-1751; doi:10.1038/eye.2009.158; published online 10 July 2009

A novel use of intravitreal injection callipers

Intravitreal injection is an increasingly employed option in the management of posterior segment disease. Approval of anti-VEGF agents for the treatment of exudative age-related macular degeneration has led to preprepared and single-use surgical packs being provided by the manufacturers. A 3.5-mm/4-mm caliper, facilitating the needle introduction through the pars plana in pseudophakic and phakic patients respectively, is also included (Figure 1). Excision of non-melanoma skin cancers with 4-mm margins has been well described with favourable results. We have chosen to use the 4-mm end of the calliper to mark the margins for excision of BCC and



Figure 1 4 mm/3.5 mm calliper supplied with intravitreal injection pack.

low-risk SCC, as we normally would do with a standard adjustable caliper, thus saving a new instrument from being opened, putting through sterilisation procedures and the cost.

Cleaning of non-surgical instruments using a 70% isopropyl alcohol swab has previously been shown to be sufficient to prevent the spread of iatrogenic infectious disease, and this technique has made the calliper reuseable.2

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Eye (2009) 23, 1751; doi:10.1038/eye.2008.327; published online 7 November 2008

latrogenic retinal diamond deposits: an unusual complication of using the diamond-dusted membrane scraper

Internal limiting membrane peeling (ILM) is recognised as an integral step in the success of macular hole (MH) repair. Needles and picks are effective in raising a membrane edge, but their sharp points can perforate the retina.² Diamond-coated instruments (30 μm diamond particles fixed with non-toxic silicone adhesive) have been developed to facilitate cortical vitreous and ILM separation from the retina.^{2,3} The diamond surface provides an abrasive edge that rubs against the retinal surface and can be effective in creating a membrane-edge that can be grasped with fine forceps. During the use of diamond-coated instruments for vitreoretinal (VR) procedures, diamond particles can be shed and deposited on the retinal surface, especially when the instruments are introduced through the sclerostomy or applied to retinal surface.

We recently performed 23-guage pars plana vitrectomy with ILM peel for a stage III MH. A Tano