Sir,
Development of crystalline keratopathy after intravitreal injections of pegaptanib

Anti-VEGF pharmacotherapy has recently become popular for the treatment of retinal vascular diseases due to the stabilization or even improvement of vision with these agents. Herein, we report a rare corneal complication of anti-VEGF treatment with pegaptanib (Macugen; OSI Inc. and Pfizer Inc., New York, NY, USA).

Case report

A 93-year-old female was first diagnosed with bilateral dry age-related macular degeneration¹ in June 2004. Her ophthalmic history was remarkable for bilateral pseudophakia with posterior capsular opacification. Her best-corrected visual acuity was counting fingers at 10-feet in the right eye and 20/30 in the left. Ophthalmoscopy revealed a disciform scar in the right eye, and centrally located geographic atrophy in the left eye. After 6 months, she developed subretinal choroidal neovascularization in the left eye that decreased her vision to 20/80. She was treated with intravitreal injection of pegaptanib, an aptamer that selectively inhibits VEGF-165 isoform,² and photodynamic treatment with verteporphyrin. A YAG-laser capsulotomy was also performed to maximize her visual gain.

Intravitreal injections of pegaptanib were repeated twice at 2 and 4 months, but her vision deteriorated to 20/300 at 7 months and she started to complain about itching. She was on no topical treatments at the time. Her anterior segment examination revealed the presence of deep stromal, branching crystalline-like deposits in the cornea OS (Figure 1a and b). No inflammation or epithelial defect was observed. Blood work to rule out systemic aetiology, including infectious, metabolic or lymphoproliferative disorders, serum protein electrophoresis, and lipid profile was unremarkable. The patient was diagnosed with a crystalline keratopathy, and the pegaptanib injections were discontinued. At 4 months after the cessation of treatment, the keratopathy spontaneously resolved.

Comment

Crystalline keratopathy is a rare condition characterized by epithelial and/or intrastromal crystalline opacities. It is most often caused by an infectious agent, particularly *Streptococcus viridans*, as a sequela of a surgical procedure, while on steroid therapy.³ The time course of the appearance of the crystalline deposits after pegaptanib injections and their disappearance after holding the drug suggest a causal relationship, although another aetiology may be involved incidentally. Further, owing to our high suspicion, we did not reinject the patient with intravitreal pegaptanib. This case is the first to describe crystalline keratopathy after intravitreal injection of a VEGF inhibitor.^{2,4} We would like to caution that corneal side effects are possible, especially in pseudophakic patients, with open or broken capsular bags.

Figure 1 Deep stromal, branching crystalline-like deposits of the left cornea after three injections of pegaptanib (a). High magnification of the same cornea (b).

Conflict of interest

The authors declare no conflict of interest.

Acknowledgements

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P Hamrah^{1,2}, PK Singh¹, L Hoesl¹ and TH Tezel²

¹The Cornea Service, Massachusetts Eye & Ear Infirmary, Department of Ophthalmology, Harvard Medical School, Boston, MA, USA

²Department of Ophthalmology & Visual Sciences, University of Louisville, Louisville, KY, USA
E-mail: Tongalp.Tezel@louisville.edu

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Sir,

An investigation of intraocular lens damage and foreign bodies using an injectable hydrophilic acrylic lens implant

We read with interest the report of the problems S Harsum *et al*¹ encountered with the hexagonal injecting system for the Raynor C-flex 570C. Our experience was identical. Initially, it was suggested that we were loading the lens incorrectly. Ultimately, we removed the foreign body fragments and sent these with the offending cartridges to the company for their analysis.

The change in design with the round tip to the nozzle appears to be successful, and we have not encountered any difficulties since.

Your study emphasises the importance of reporting difficulties with devices to the manufacturer and the MHRA.

Conflict of interest

The authors declare no conflict of interest.

Reference

- 1 Harsum S, Mann S, Clatworthy I, Lewin J, Little B. An investigation of intraocular lens damage and foreign bodies using an injectable hydrophilic acrylic lens implant. *Eye* 2010; **24**(1): 152–157.

A Pyott and C Barras

Ophthalmology, Raigmore Hospital, Inverness, UK
E-mail: andrew.pyott@nhs.net

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Sir,

Response to Pyott and Barras

We thank Pyott and Barras for their comments.

With a plethora of innovative devices flooding the market, one must remain vigilant and guarded when using new products. If there are deficiencies in a product, then many clinicians are uncertain how to proceed in order to constructively pursue their concerns. If one considers that there is a potential threat to patient safety, then one is duty bound to highlight this to the manufacturer and to expect a timely and proportionate response. However, if their response is delayed or not entirely satisfactory, then help is at hand in the form of the Medicines and Healthcare products Regulatory Agency (MHRA). They have an online adverse incident reporting scheme for clinicians (<http://www.mhra.gov.uk/Safetyinformation/Reportingsafetyproblems/Devices/index.htm>). They will conduct an investigation and have the authority to issue alerts or ultimately to recall devices.

Conflict of interest

The authors declare no conflict of interest.

S Harsum, S Mann, I Clatworthy, J Lewin and B Little

Department of Ophthalmology, Moorfields Eye Hospital, London, UK
E-mail: harsum@doctors.org.uk

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Sir,

Treatment of a choroidal neovascular membrane in a patient with late-onset retinal degeneration (L-ORD) with intravitreal Ranibizumab

We report the first case of a choroidal neovascular membrane (CNV) in a patient with late-onset retinal degeneration (L-ORD) successfully treated with intravitreal Ranibizumab (Lucentis).

Case report

A 61-year-old man, heterozygous for the Ser163Arg mutation in C1QTNF5, presented with a 4-week history of distortion in his right eye. His visual acuity (VA) was 68 ETDRS letters OD and 82 letters OS. Fundus fluorescein angiography (FFA) showed a juxtafoveal classic CNV (Figure 1) and optical coherence tomography (OCT) confirmed intra-retinal oedema over the area of the CNV (Figure 1). Owing to the reported poor outcome from the use of focal argon laser photocoagulation in such cases,¹ the patient received an intravitreal injection of Ranibizumab (0.5 mg). This was followed by two further injections at 4-weekly intervals. Four weeks after receiving the