

changes with a tessellated appearance of the overlying retina were noted (Figures 1a and b). These regions demonstrated stippled hypoautofluorescence (Figures 1c and d) and regions of inner neurosensory retinal loss, RPE disruption, and attenuated choroid layers on ocular coherence tomography (OCT, Figures 1e and f). Single-flash cone responses (light-adapted) were reduced by 20% in amplitude bilaterally and 30 Hz flicker responses showed delayed implicit times. Multifocal electroretinography of the right eye demonstrated significant noise whereas the left eye showed very low amplitudes in the inferotemporal retina. Arden ratios on electrooculography were 1.5 in both eyes. The patient's plaquenil was therefore discontinued and he was placed on Eculizumab.

Comment

The 'wedge-shaped' pigmentary changes and their distribution suggests the patient's CAPS flare yielded choroidal ischemia (precipitating serous effusions¹) and eventual infarction through posterior ciliary artery occlusion. Interestingly, the patient's long posterior ciliary arteries seemed relatively spared with ocular hypotony (from ciliary body ischemia¹) never noted. Retinal vasculopathy also remained notably absent, perhaps owing to the retina's autoregulatory capacity—a characteristic the choroid lacks.²

An important consequence of choroidal and, consequently, RPE impairment in this exceedingly rare APS manifestation^{3,4} is that plaquenil, considered a standard therapy for systemic catastrophic APS,⁵ should be eschewed given both the RPE's increased susceptibility to toxicity and the poor reliability of screening for such toxicity in these cases.

Conflict of interest

The authors declare no conflict of interest.

References

- 1 Hayreh SS, Chopdar A. Occlusion of the posterior ciliary artery. V. Protective influence of simultaneous vortex vein occlusion. *Arch Ophthalmol* 1982; **100**(9): 1481–1491.
- 2 Hayreh SS. Acute occlusive disorders of the choroidal vasculature. *Int Ophthalmol* 1983; **6**(2): 139–148.
- 3 Ang LP, Yap EY, Fam HB. Bilateral choroidal infarction in a patient with antiphospholipid syndrome: a case report. *Clin Experiment Ophthalmol* 2000; **28**(4): 326–328.
- 4 Rehak M, Meier P, Buhner E, Petros S, Wiedemann P. Occlusion of choroidal vessels in a patient with catastrophic antiphospholipid syndrome. *Acta Ophthalmol* 2011; **89**(6): 595–596.
- 5 Petri M. Use of hydroxychloroquine to prevent thrombosis in systemic lupus erythematosus and in antiphospholipid antibody-positive patients. *Curr Rheumatol Rep* 2011; **13**(1): 77–80.

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Sir, Anomalies in drug choice in glaucoma clinics

We investigated anomalies in drug choice when prescribing new glaucoma drops in glaucoma clinics. A total of 1436 records were assessed for 6 months. Of these, 115 patients had a change in drop. An independent glaucoma consultant ophthalmologist categorised the drug choice into three using clearly defined criteria: no anomaly/error, anomaly, error.

An anomaly was defined as the prescription of two new drugs simultaneously, prescription of an additional drug without stopping current ineffective drug,¹ prescription of a new drug without considering non-adherence,² and prescription change to unorthodox drug frequency.³ An error was defined as the prescription of a contraindicated drug or a drug with a clearly documented previous adverse drug reaction. Benefit of doubt was given at all times (e.g., multiple changes in drops were considered to be reasonable practice where a pressure rise was an unacceptable risk).

We found that over three quarters of changes in medication had consultant or fellow involvement. Optometrists, registrars, and associate specialists, collectively, were responsible for less than a fifth ($n = 21$) of changes in glaucoma drops.

There was a high standard of clinical practice in 92 (80%) cases. In one-fifth, therapeutic management was considered to be anomalous or erroneous: there were 15 anomalies in management (13%, 95% CI 7–19%) and 8 errors (7%, 95% CI 2–12%). Seven of these were prescribed a drug with a clearly documented previous adverse reaction and one patient was prescribed Timolol despite advice from their cardiologist to avoid beta blockers.

The following risk factors were examined: day of week, time of clinic, patients per clinician, presence of consultant, and staff grade. There was no correlation between these factors and the numbers of errors or anomalies occurring.

Errors are inevitable, however, the magnitude reported here is unacceptably high. The majority may be accounted for by a failure to fully examine hospital records, and changes are needed to assist the clinicians in busy clinics. Electronic records accompanied by decision support reduce errors in prescribing.⁴ We are currently working towards this. Another important step is to encourage shared decision making with patients. The results of the study are being introduced into the glaucoma service induction training.

Conflict of interest

The authors declare no conflict of interest.

References

- 1 Servatt JJ, Bernardina CR. Effects of common topical antiglaucoma medications on the ocular surface, eyelids and periorbital tissue. *Drugs Aging* 2011; **28**(4): 267–282.

- Lacey J, Cate H, Broadway DC. Barriers to adherence with glaucoma medications: a qualitative research study. *Eye* 2009; **23**(4): 924–932.
- Shemesh G, Moisseiev E, Lazar M, Kurtz S. Intraocular pressure reduction of fixed combination timolol maleate 0.5% and dorzolamide 2% (Cosopt) administered three times a day. *Clin Ophthalmol* 2012; **6**: 283–287.
- Riedmann D, Jung M, Hackl WO, Stuhlinger W, van der Sijs H, Ammenwerth E. Development of a context model to prioritize drug safety alerts in CPOE systems. *BMC Med Inform Decis Mak* 2011; **11**: 35.

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Sir, Preventable eye injuries while fly fishing

The article by Morris *et al*¹ prompts me to bring to readers' attention the risks inherent in the fly-fishing technique known as Spey casting, when the fly line with attached 'fly', tied on a single, double, or treble hook, is cast first to the left, then the right, and then forwards, the line being all the time in front of the angler so that obstructions behind—such as trees—are not inadvertently hooked.

In June 2013, I was Spey casting on the Lower Oykel river, Highland, with a variable wind blowing sometimes up- and sometimes downstream. A sharp 'crack' caused the ghillie, sitting some 50 m away on the bank, to ask 'What was that?' It was the fly shattering my right spectacle lens, which fell into several pieces when removed from the frame. Had I not been wearing glasses, my eye would have been destroyed.

Some weeks later, two unsolicited catalogues advertising angling products arrived; both had in their fishing lines section photographs of men Spey casting without eye protection. I wrote to both angling companies enclosing the attached photo (Figure 1). One



Figure 1 Glasses damaged while Spey casting in a strong wind.

responded, indicating that they would bring the matter to the (subcontracted) advertiser's attention—the other did not reply.

Could our College have a role in promoting the use of safety glasses in this situation? For an example see: www.oveRxcast.com.

Conflict of interest

The author declares no conflict of interest.

Reference

- Morris DS, Willis S, Minassian D, Foot B, Desai P, MacEwen CJ. The incidence of serious eye injury in Scotland: a prospective study. *Eye (Lond)* 2014; **28**(1): 34–40.

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Sir, Response to 'Preventable eye injuries while fly fishing'

We thank Mr Finlay¹ for drawing your readers attention to the inherent dangers of Spey casting while fly fishing, and indeed the general danger to the eye from any form of fishing, from his own personal experience. It is interesting to note that injuries from fishing accounted for 1% of all those reported injuries in the 2009 Scottish Ocular Trauma Study (unpublished data) and 1.7% in the 1992 Scottish Ocular Trauma Study.²

We are aware that the American Academy of Ophthalmology is involved in eye injury prevention with their 'EyeSmart' program (<http://www.geteyesmart.org/eyesmart/>), and acknowledge that similar campaigns in the UK (http://www.nib.org.uk/eyehealth/lookingafteryoureyes/Pages/safe_eyes.aspx) have had a prominent role in eye injury prevention, but we would urge caution on focusing on a specific area like fishing without gathering more evidence of the incidence of injury and risk involved.

Conflict of interest

The authors declare no conflict of interest.

References

- Finlay RD. Preventable eye injuries while fly fishing. *Eye* 2014; **28**: 775.
- Desai P, MacEwen CJ, Baines P, Minassian DC. Incidence of cases of ocular trauma admitted to hospital and incidence of blinding outcome. *Br J Ophthalmol* 1996; **80**(7): 585.