

Sir,
Epileptic convulsion following aspirin withdrawal before lid surgery

When acetylsalicylic acid (aspirin) is co-administered with sodium valproate (SV), the free fraction of SV increases, thereby increasing the anti-epileptic efficacy of SV.¹ We report a case in which a patient with epilepsy, who had been previously well controlled for several years on SV, suffered a seizure following aspirin withdrawal before elective lid surgery. The current Royal College of Ophthalmologist's (RCO) preoperative assessment guidelines draw attention to the potential risks associated with discontinuing anticoagulants before surgery.² It further states in some instances these may be continued; for other procedures the decision to modify anticoagulant therapy should be based upon the perceived risk-benefit ratio.²

Case report

A 68-year-old lady with bilateral lower lid ectropion and punctal stenosis was listed for bilateral lid shortening procedures and punctoplasty under local anaesthesia.

She had a 12-year history of epilepsy with good control on SV for the first 9 years. Three years ago she had a single grand mal seizure and her treatment dose was increased, following which she had been free of seizures. She was on treatment for hypertension and hypercholesterolaemia. She had been on 75 mg of aspirin for 3 years.

As part of her preoperative instructions, she was asked to stop taking aspirin 3 weeks before surgery. Ten days after stopping aspirin she suffered a grand mal seizure. Her dose of SV had not been altered. Aspirin was recommenced following uncomplicated surgery and she has not suffered a further seizure to date (9 months later). Her driver's license has however been revoked for a period of 1 year.

Comment

Aspirin is very commonly used as an antiplatelet agent in our population of patients undergoing elective ophthalmological surgery. Our case stresses the need for the surgeon to remain mindful of the potential risks of stopping aspirin treatment. Furthermore, this case suggests that the RCO guidelines may need to be amended to include the risk of drug interactions following discontinuation of aspirin or warfarin, with particular caution in patients with epilepsy. It also reminds the surgeon that a careful judgment needs to be made about whether aspirin (or warfarin) cessation is entirely necessary, based upon both the individual

patient's medical history and the intended surgical procedure.

Aspirin interacts with a wide range of drugs, including anticonvulsants, enhancing the effects of SV, and phenytoin.^{1,3,4} Principally, the free fraction of SV is increased by coadministration of aspirin, as aspirin binds more strongly to plasma protein thereby displacing SV from its protein-bound form, resulting in up to a fourfold increase of the free fraction of SV with consequent increased efficacy.^{1,3}

On the basis of her previously excellent control, the temporal relationship of aspirin cessation and subsequent seizure, and the well-established effects of aspirin on valproate metabolism, we believe that withdrawal of aspirin treatment led to our patient suffering a seizure.

In view of an increasing prevalence of aspirin use in our population of patients we have to be mindful of the possible risks of stopping aspirin treatment before surgery. In patients with epilepsy this could potentially result in a life-threatening complication or have significant consequences, including loss of a patient's driving license.

References

- 1 Abbott FS, Kassam J, Orr JM, Farrell K. The effect of aspirin on valproic acid metabolism. *Clin Pharmacol Ther* 1986; **40**: 94–100.
- 2 www.rcophth.ac.uk/docs/profstands/ophthalmic-services/PreOpAssessment2005.pdf.
- 3 Pisani F. Influence of co-medication on the metabolism of valproate. *Pharm Weekblad Sci* 1992; **14**: 108–113.
- 4 Fraser DG, Ludden TM, Evens RP, Sutherland III EW. Displacement of phenytoin from plasma binding sites by salicylate. *Clin Pharmacol Ther* 1980; **27**: 165–169.

M Scheepers¹, A Pearson² and M Michaelides³

¹Royal Berkshire Hospital, Reading, Berkshire, UK

²Prince Charles Royal Eye Unit, King Edward VIII Hospital, Windsor, UK

³Moorfields Eye Hospital, London, UK

Correspondence: M Michaelides,
Moorfields Eye Hospital, City Road,
London, EC1V 2PD, UK
Tel: +44 79 8001 3052;
Fax: +44 20 7608 6863.
E-mail: michel.michaelides@ucl.ac.uk

Eye (2007) **21**, 446. doi:10.1038/sj.eye.6702618;
published online 13 October 2006