

11-year-old boy. It is unclear why these patients developed Cushing's syndrome when there are many others using similar amounts of topical ocular steroids. It has been suggested that in patients with Cushing's syndrome, the pituitary gland responds differently from others who are given the same dose of steroid.⁵ In this reported case, the diagnosis of iatrogenic Cushing's syndrome with a depressed hypothalamo-pituitary-adrenal axis was confirmed by a low basal cortisol level and the inability to raise cortisol production after synacthen. The patient's weight gain also correlated well to the increased topical steroids usage after initial presentation (Figure 3). The use of preoperative intravenous methylprednisolone and bursts of higher topical steroid usage may have contributed to the development of Cushing's syndrome. Interestingly, Cushing's syndrome has been reported in a 24-year-old male after 60 mg of epidural methylprednisolone.⁶

When there is a suspicion of Cushing's syndrome, it is essential to warn the patient regarding possible life-threatening infections and the need to seek immediate medical help if unwell. Also, the patient needs to be advised on the correct drop instillation technique including punctal occlusion to reduce systemic steroid absorption. The Glaucoma Unit has started to obtain baseline weight, blood pressure, and glucose routinely in patients likely to be on long-term topical steroid therapy. The management of this patient involved close liaison with the endocrinology and rheumatology units and careful monitoring of the hypothalamo-pituitary-adrenal axis when withdrawing steroids. This would not have been possible without the use of nonsteroidal-based systemic immunosuppression to control the patient's uveitis. The patient was commenced on systemic immunosuppression with methotrexate in close collaboration with the endocrine and rheumatology units. The aim of this was to allow a gradual reduction in the topical ocular steroids while maintaining adequate control of his severe refractory chronic anterior uveitis.

This case of Cushing's syndrome illustrates the potential for unusual and serious extraocular side effects of topical ocular steroids. It is essential that the treating ophthalmologist be aware of this to avoid life-threatening complications.

Acknowledgements

We have no financial or propriety interest in any material or method mentioned.

References

- 1 Wilson AM, Blumsohn A, Jung RT, Lipworth BJ. Asthma and Cushing's syndrome. *Chest* 2000; **117**: 593–594.
- 2 Homer JJ, Gazis TG. Cushing's syndrome induced by betamethasone nose drops. In rhinological disease betamethasone should be regarded as systemic corticosteroid. *BMJ* 1999; **318**: 1355.
- 3 Ozerdem U, Levi L, Cheng L, Song MK, Scher C, Freeman WR. Systemic toxicity of topical and periocular corticosteroid therapy in an 11-year-old male with posterior uveitis. *Am J Ophthalmol* 2000; **130**: 240–241.
- 4 Romano PE, Traisman HS, Green OS. Fluorinated corticosteroid toxicity in infants. *Am J Ophthalmol* 1977; **84**: 249–250.
- 5 Frey FJ, Amend Jr WJ, Lozada F, Frey BM, Benet LZ. Endogenous hydrocortisone, a possible factor contributing to the genesis of cushingoid habitus in patients on prednisone. *J Clin Endocrinol Metab* 1981; **53**: 1076–1080.
- 6 Tuel SM, Meythaler JM, Cross LL. Cushing's syndrome from epidural methylprednisolone. *Pain* 1990; **40**: 81–84.

MY-M Chiang¹, M Sarkar², JM Koppens¹, J Milles² and P Shah¹

¹Birmingham and Midland Eye Centre, Birmingham, UK

²Good Hope Hospital, Birmingham, UK

Correspondence: P Shah, Birmingham and Midland Eye Centre, City Hospital NHS Trust, Dudley Road, Birmingham B18 7QH, UK
Tel: +44 121 5076808;
Fax: +44 121 5076791.
E-mail: p.f.shah@talk21.com

Eye (2006) **20**, 725–727. doi:10.1038/sj.eye.6701956;
published online 18 November 2005

Sir,

Reply to intravitreal triamcinolone for branch retinal vein occlusion

I read the article by Jonas *et al*¹ on 'Branch retinal vein occlusion treated by intravitreal triamcinolone acetate'. I disagree with their conclusion that an intravitreal injection of triamcinolone can increase visual acuity in patients with branch retinal occlusion. If one looks in Tables 2 and 3 at the preoperative and study end visual acuities of the study and control groups there is no significant change in acuity over the study period for either group. In addition, there is no significant difference between the groups at either time point. Given that a total of 19 comparisons of mean visual acuity were performed I suggest that a correction of the level of significance should have been performed.² This would have meant that none of the comparisons of acuity at intermediate time points in Tables 2 and 3 would have reached statistical significance.

References

- 1 Jonas JB, Akkoyun I, Kampeter B, Kreissig I, Degenring RF. Branch retinal vein occlusion treated by intravitreal triamcinolone acetonide. *Eye* 2005; **19**: 65–71.
- 2 Altman DG. *Practical Statistics for Medical Research*, 1st edn. Chapman & Hall: London, 1991.

M Wilkins

Moorfields Eye Hospital, City Road, London EC1V 2PD, UK

Correspondence: M Wilkins,
Tel: +44 207 2533 411.
E-mail: mark.wilkins@moorfields.nhs.uk

Eye (2006) **20**, 727–728. doi:10.1038/sj.eye.6701947;
published online 8 July 2005

Sir,
Reply to intravitreal triamcinolone acetonide as treatment of branch retinal vein occlusion

We would like to thank Dr Wilkins for his interest in our study.¹ We do agree with him that the statistical basis of the study is relatively weak. As he pointed out, multiple comparisons were performed so that Bonferoni's method to correct for multiple comparisons might have been necessary. On the other hand, the number of patients in the study group was rather low ($n = 10$), despite of which the difference in visual acuity between baseline measurement and measurement at 1 month after injection was marginally significant ($P = 0.027$). Additionally, the difference between visual acuity at baseline of the study and the best visual acuity during follow-up was significant in the study group, but not in the control group. Furthermore, the study fits with other investigations on the intravitreal use of triamcinolone acetonide for a number of diseases associated with cystoid macular oedema including branch retinal vein occlusion.^{2–4} In all of these studies, a decrease in macular oedema, and in most of the studies, an increase in visual acuity was observed. In conclusion, we appreciate very much Dr Wilkins' comments and consider the present study as a precursor of ongoing randomized controlled trials on intravitreal triamcinolone acetonide as treatment of retinal vein occlusions.

References

- 1 Jonas JB, Akkoyun I, Kampeter B, Kreissig I, Degenring RF. Intravitreal triamcinolone acetonide as treatment of branch retinal vein occlusion. *Eye* 2005; **19**: 65–71.

- 2 Chen SD, Lochhead J, Patel CK, Frith P. Intravitreal triamcinolone acetonide for ischaemic macular oedema caused by branch retinal vein occlusion. *Br J Ophthalmol* 2004; **88**: 154–155.
- 3 Özkiris A, Evereklioglu C, Erkilic K, Ilhan Ö. The efficacy of intravitreal triamcinolone acetonide on macular edema in branch retinal vein occlusion. *Eur J Ophthalmol* 2005; **1**: 96–101.
- 4 Jonas JB, Kreissig I, Degenring RF. Intravitreal triamcinolone acetonide for treatment of intraocular proliferative, exudative and angiogenic diseases. *Prog Ret Eye Res* 2005 (forthcoming).

JB Jonas, I Akkoyun, B Kampeter, I Kreissig and RF Degenring

Department of Ophthalmology and Eye Hospital, Faculty for Clinical Medicine Mannheim, Ruprecht-Karls-University Heidelberg, Germany

Correspondence: JB Jonas,
Universitäts-Augenklinik, Theodor-Kutzer-Ufer 1-3, 68167 Mannheim, Germany
Tel: +49 621 383 2652;
Fax: +49 621 383 3803.
E-mail: Jost.Jonas@augen.ma.uni-heidelberg.de

Proprietary interest: none

Eye (2006) **20**, 728. doi:10.1038/sj.eye.6701953;
published online 10 June 2005

Sir,
Macrophthalmos as a long-term outcome of severe open globe injury

Long-term sequelae of open globe injuries include cataract, glaucoma, phthisis bulbi, and sympathetic ophthalmia. We present a case of a severe open globe injury in childhood resulting in macrophthalmos as an adult.

Case report

A 39-year-old man presented with gradual increased prominence of his left eye, which had suffered a corneal penetrating eye injury from a wooden stick at age 7 years and had undergone primary repair.

On examination, best-corrected visual acuities were 6/7.5 OD and perception of light OS. The appearance of the left eye is shown in Figure 1. Intraocular pressures were 16 mmHg OD and 28 mmHg OS. The left eye was aphakic.

Thyroid function tests were normal. An orbital CT scan revealed an elongated left axial length of 33 mm,