an increase in the optic nerve diameter[5] or optic nerve sheath haemorrhage[6] that correlated with the anatomic features of an avulsed optic nerve head in the presence of overlying vitreous haemorrhage, as is frequently the case. These two cases amply demonstrate that ultrasonography is a helpful tool in the diagnosis of optic nerve avulsion obscured by overlying vitreous haemorrhage and a reasonably better alternative to expensive and less readily available neuroimaging studies.

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R Sawhney[1], S Kochhar[2], R Gupta[1], R Jain[1] and S Sood[1]

[1]Department of Ophthalmology
Government Medical College Hospital
Sector-32 Chandigarh, India

[2]Department of Radiodiagnosis
Government Medical College Hospital
Sector-32 Chandigarh, India

Correspondence: R Sawhney
Tel/Fax: +91 0172 607707

Sir,

Granulomatous anterior uveitis associated with 0.2% topical brimonidine

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Brimonidine tartrate 0.2% is an α_2 adrenergic receptor agonist used in the treatment of open-angle glaucoma and ocular hypertension. Granulomatous anterior uveitis in association with topical brimonidine has been reported in only five patients since its introduction.[1,2] We report another case of bilateral granulomatous anterior uveitis developing as a late side effect of topical brimonidine therapy, providing further evidence of this potentially sight-threatening complication.

Case report

A 79-year-old woman presented in February 2002 with bilateral granulomatous anterior uveitis. She had no prior history of uveitis and was in good general health. Following diagnosis with advanced primary open-angle glaucoma in 1998, she was started on topical timolol 0.25% twice daily to both eyes. Adjunctive treatment with topical latanoprost 0.005% to both eyes at night was initiated 1 year later. In August 2000, this was changed to brimonidine 0.2% instilled twice daily to both eyes, as the intraocular pressures were inadequately controlled. Treatment with timolol continued. The patient subsequently developed bilateral age-related macular disciform degeneration, reducing her vision to hand movements right and 4/60 left.

At presentation, 18 months after starting treatment with brimonidine, the patient gave a 4-week history of increasingly sore and uncomfortable eyes. As her vision was so poor, she was unable to see how injected her eyes were and had continued to instil her medication while awaiting her routine follow-up appointment. She was found to have severe conjunctival injection bilaterally, with florid conjunctival follicles. There were mutton-fat keratic precipitates, 2+ anterior chamber cells, posterior synechiae and a few iris nodules bilaterally (Figure 1). Intraocular pressure was elevated to right 22 mmHg and left 40 mmHg. There was no posterior segment

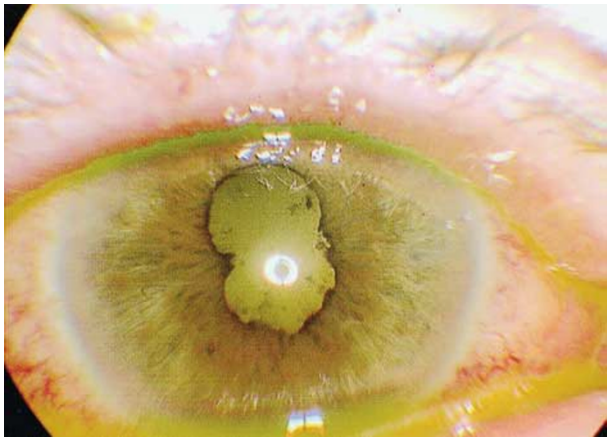

Figure 1 Colour photograph demonstrating granulomatous keratic precipitates and posterior synechiae.

involvement. A diagnosis of bilateral anterior uveitis secondary to brimonidine was made and she was treated with 2 hourly topical dexamethasone 0.1% and cyclopentolate 1% thrice daily to both eyes. Both timolol and brimonidine were discontinued and the intraocular pressure initially managed with oral acetazolamide. The inflammation settled within 3 weeks and timolol was restarted without any side effect. Systemic evaluation comprising full blood count, urea and electrolytes, liver function tests, serum angiotensin converting enzyme, ESR, CRP, syphilis serology, and chest X-ray were all normal.

The patient was understandably reluctant to consider a subsequent rechallenge test with topical brimonidine, feeling that it posed a threat to her already limited vision. After 1 month, she restarted brimonidine to the right eye but presented after only three instillations with florid conjunctival injection and an anterior chamber flare in the right eye. There were no cells and the intraocular pressure was normal. The left eye remained quiet. The challenge was discontinued and the conjunctival reaction settled quickly on topical steroids.

Comment

Goyal and Ram[2] reported granulomatous uveitis occurring in one patient in association with topical brimonidine therapy in this journal. Byles *et al*[1] also reported four cases of granulomatous anterior uveitis occurring after 12 months of brimonidine use. In all cases, the uveitis settled rapidly after withdrawal of the drug and reoccurred on rechallenge testing, in the absence of other causes for uveitis. The authors observed that brimonidine, nevertheless, fails to meet the suggested criteria for establishing causality of adverse events by drugs.[3] These include the reaction being frequently described and well documented. Our case lends additional weight to the evidence for brimonidine causing granulomatous anterior uveitis. We feel it is likely that the rechallenge test was negative in our patient because brimonidine was only instilled on three occasions before being discontinued.

Allergic reactions to brimonidine are well recognised, usually consisting of allergic contact dermato-conjunctivitis or follicular conjunctivitis, with reported rates of up to 25%.[4,5] Cessation of treatment at this stage, usually after 6–9 months of therapy, may mean that many patients stop using topical brimonidine before anterior uveitis arises at a later stage. Byles *et al* proposed that anterior uveitis may be more likely to occur in patients who continue to instil brimonidine after an allergic reaction has developed. This was almost certainly the case in our patient in whom the new observation of iris nodules may reflect the chronicity of uveitis arising from continued administration of brimonidine.

We reported our case of granulomatous uveitis as a suspected adverse reaction to topical brimonidine to the Committee on Safety in Medicines via the UK adverse drug reactions reporting scheme. They had no record of any previous reports despite there being published cases. We feel it is important to bring any further cases to the attention of the Committee on Safety in Medicines as well as the ophthalmic literature in order to establish the incidence of this potentially sight-threatening side effect.

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CA Cates and MN Jeffrey

Department of Ophthalmology
Queen Alexandra Hospital
Portsmouth, UK

Correspondence: CA Cates
Tel: +44 23 9228 6000
Fax: +44 23 9228 6440
E-mail: carolynacates@hotmail.com

Sir,

Bitot's spots following hemicolectomy

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Vitamin A deficiency, a known complication after small bowel bypass surgery, is rare after large bowel bypass surgery. We report a case of Bitot spots on the conjunctiva