LETTERS TO THE EDITOR

Prevention of blindness

EDITOR,—May I draw attention to the policy and functions of this charity, which has been in operation since 1976. Our aim is to extend the sight saving activities of the leading British agencies concerned with blindness. We raise funds for research projects at British hospitals and universities and fund blindness prevention projects abroad such as mobile eye camps and measures to deal with river blindness.

Grants, normally not in excess of £10 000 a year, for worthy projects, are made three times a year, in January, June, and September, in the light of available funds. Grants may be made to institutions or to individuals, and must be clearly related to blindness prevention. My council includes some of the country's leading ophthalmologists and is chaired by Sir Frank Hartley. External advice is sought, when necessary. The council aims to extend, and not to duplicate, the sight saving activities of other organisations. We therefore need to know when applicants have sought help elsewhere, even unsuccessfully. Our policy is to support UK and foreign projects on a roughly 50/50 basis. Projects which have a low relevance to a major cause of blindness will not be supported.

Applicants must obtain a standard form from Director, British Council for Prevention of Blindness, 12 Harcourt Street, London W1H 1DS (071-724 3716). Forms must reach us by 30 April, 10 August, and 10 December for consideration at the relevant meeting.

DAVID CHESTERMAN
British Council for Prevention of Blindness,
12 Harcourt Street,
London W1H 1DS

Extravasation of acetazolamide

EDITOR,—Intravenous acetazolamide is administered by ophthalmologists frequently. The reported incidence of side effects is extremely low. We wish to draw attention to a case of extravasation of acetazolamide causing serious soft tissue injury.

A 55-year-old woman was seen as an emergency with raised intraocular pressure in the right eye. She had been given intravenous acetazolamide on presentation 2 days earlier. Both oral and intravenous acetazolamide had been administered at various intervals over the preceding year.

On this occasion 500 mg of acetazolamide were administered over 2 minutes via a standard 21 gauge green needle into a vein in the right antecubital fossa. Nothing unusual was noted at this time.

On review after an interval of 90 minutes the patient complained of intense pain in the region of the right antecubital fossa. Examination of this area revealed no abnormality, and no action was taken.

The patient was reviewed 24 hours later, by which time ulceration had occurred in the skin around the injection site (Fig 1).

She has since undergone two plastic surgical

Figure 1 Ulceration of the forearm 24 hours after injection.

procedures to repair the skin defect. The appearance of her right arm 2 months after surgery suggests that some permanent disfigurement will result.

We wish to draw attention to this case as a specific remedy exists which should be administered if extravasation is recognised.

A number of cases of extravasation of fluorescein have been reported.¹ While there is no previous report of extravasation of acetazolamide in the literature there are numerous reports of similar occurrences with other alkaline substances.

The pH of acetazolamide is 9.1. It is generally accepted that a recognised case of extravasation of alkali should be treated at once with a subcutaneous injection of 1–2 ml of sodium citrate 3.8% (though reviews of the literature cite no clinical evidence for the effectiveness of this antidote^{2,3}). The area should be massaged and cold compresses applied at regular intervals for up to 24 hours. Topical hydrocortisone 1% may also be used. Spreading agents such as hyaluronidase should not be used.

It is recommended that ophthalmology departments keep a stock of sodium citrate for use in the event of extravasation of acetazolamide.

ANDREW CALLEAR
GRAHAM KIRKBY
Birmingham and Midland Eye Hospital,
Church Street,
Birmingham B3 2NS

- 1 Elman MJ, Fine SL, Sorenson J, Yannuzzi L, Hoopes J, Weidenthal DT, *et al.* Skin necrosis following fluorescein extravasation. A survey of the Macula Society. *Retina* 1987; 7: 89–93.
- 2 Heckler FR. Current thoughts on extravasation injuries. *Clin Plast Surg* 1989; 16: 557–63.
- 3 Montrose P. Extravasation management. *Semin Oncol Nurs* 1987; 3: 128.

Primary meningococcal keratoconjunctivitis in an extended contact lenses wearer

EDITOR,—Acute bacterial conjunctivitis caused by *Neisseria meningitidis* occurs rarely. Primary meningococcal conjunctivitis is very uncommon in adults. A recent review of the

literature showed that ocular complications occurred in 13 of 84 cases (15.5%); there were only two cases of associated keratitis.¹ The widespread use of contact lenses has increased the number of lens associated infections.² We report for the first time in the literature a case of primary meningococcal keratoconjunctivitis in an adult who used extended wear soft contact lenses.

A 26-year-old woman visited the emergency room because of right ocular pain for 12 hours. She was using extended wear soft contact lenses. She had palpebral oedema, conjunctival hyperaemia with purulent discharge, mild keratitis, and perilimbal infiltrates. No systemic symptoms were observed. Therapy was started with topical tobramycin and diclofenac. After 3 days, the conjunctival culture revealed a serotype B *N meningitidis* infection (sensitive to chloramphenicol and rifampicin), so rifampicin 600 mg by mouth every 12 hours for 48 hours and topically for 1 week was instituted. Our patient reported that some days earlier she had been in contact with a child who had a meningococcal disease. After 7 days, there was a clinical resolution.

Microbial keratitis remains a serious condition with significant functional morbidity. The incidence of bacterial keratitis, infrequent in normal eyes, has increased with the use of contact lenses. The number of people wearing soft contact lenses has grown along with an increasing number of lens associated infections.³ Numerous reports show that extended wear lenses in particular may increase the risk of ulcerative keratitis.^{4,5} The greater risk with extended wear soft contact lenses may reflect the influence of continuous wear on susceptibility to infection.³ This implies that some extended soft contact lens wearers may be infected by Gram negative organisms from environmental sources.³ *N meningitidis* is a Gram negative micro-organism that exceptionally causes acute conjunctivitis in both children and adults. Primary meningococcal conjunctivitis is assumed to be caused by the direct inoculation of *N meningitidis* into the conjunctival sac through airborne micro-organisms or manual contact.¹

CRISTINA ARANZASTI
RAQUEL AGUIRREBURUALDE
RICARDO MARTINEZ
JUAN A DURÁN DE LA COLINA
Department of Ophthalmology,
Hospital de Cruces,
Baracaldo, Spain,
University of Basque Country

LOURDES GAZTELURRUTIA
Department of Microbiology,
Hospital de Cruces,
Baracaldo, Spain

- 1 Barquet N, Gasser I, Domingo P, Moraga FA, Macaya A, Elcuaz R. Primary meningococcal conjunctivitis: report of 21 patients and review. *Rev Infect Dis* 1990; 12: 838.
- 2 Poggio EC, Glynn RJ, Schein OD, Seddon JM, Shannon MJ, Scardino VA, *et al.* The incidence of ulcerative keratitis among users of daily-wear and extended-wear soft contact lenses. *N Engl J Med* 1989; 321: 779.
- 3 Dart JKG. Predisposing factors in microbial keratitis: the significance of contact lens wear. *Br J Ophthalmol* 1988; 72: 926.
- 4 Mac Rae S, Herman C, Stulting D, Lippman R, Whipple D, Cohen E, *et al.* Corneal ulcer and adverse reaction rates in premarket contact lens studies. *Am J Ophthalmol* 1991; 111: 457.
- 5 Holden BA, Sweeney DF, Vannas A, Nilsson KT, Efron N. Effects of long-term extended contact lens wear on the human cornea. *Invest Ophthalmol Vis Sci* 1985; 26: 1489.