LETTERS TO THE EDITOR

Bilateral simultaneous spontaneous acute angle closure glaucoma in a herpes zoster patient

SIR,—Acute angle closure glaucoma is very common and may occur in predisposed eyes, frequently following precipitating conditions. However, the vast majority of patients present with unilateral acute angle closure, and the occurrence of simultaneous spontaneous attack is extremely rare. We have managed a case of simultaneous spontaneous bilateral acute angle closure in a patient with T-2 dermatome herpes zoster.

A 61-year-old woman was referred to our clinic because of severe headache, vomiting, and decreased visual acuity for two days prior to admission. Five days earlier a T-2 dermatome herpes zoster (Figs 1 and 2) was diagnosed and a course of oral acyclovir (Zovirax), 200 mg five times a day, was begun. On examination her visual acuity was counting finger OD and hand motion OS. The intraocular pressure on applanation tonometry was 48 mmHg OD and 58 mmHg OS. Both eyes had ciliary congestion, oedematous cornea, shallow anterior chamber, and mid dilated pupils. The lens showed a +2 nuclear sclerosis cataract. The retina was attached and the optic nerve heads showed some hyperaemia.

The patient was treated with mannitol, acetazolamide 500 mg intravenously, pilocarpine 2%, and dexamethasone, and within 90 minutes the intraocular pressure was 10 mmHg OU. During the following two days laser iridotomies were performed in both eyes, and today in both eyes the best corrected vision is 20/30. Intraocular pressure is 14 mmHg OD and 13 mmHg OS, the fields of vision are normal, and laser iridotomies are patent.

Acute angle closure glaucoma is frequently precipitated by mydriasis caused by parasympathomimetic and sympatholytic agents, dim illumination, and prone position. Emotional stress may also precipitate it.¹ Even though in most individuals presenting with acute angle closure both eyes share the predisposing characteristics, only one eye is involved. Simultaneous presentation is rare but has been described.²

This unusual presentation of simultaneous bilateral involvement in a patient with herpes zoster suffering agonising pain focuses our attention on another possible precipitating factor. Pain, possibly through increased

sympathetic tone, and subsequent mydriasis might initiate a response resulting in angle closure in predisposed individuals.

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- 2 Appelby RS, Kinder SL. Bilateral angle closure in a 14 year old boy. *Arch Ophthalmol* 1971; 86: 449–500.

The association of Fuchs's corneal endothelial dystrophy with angle closure glaucoma

SIR,—We read with great interest the article by Pitts and Jay.¹ We report the results of our study on this subject, which support their observation.

The association of Fuchs's corneal dystrophy with angle closure glaucoma is usually attributed to the oedematous thick cornea crowding the anterior chamber angle.^{2–4} We have the impression that the acute angle closure glaucoma in patients with Fuchs's dystrophy is unrelated to the corneal oedema, since it often occurs long before the process of corneal decompensation. In order to verify this observation we performed a retrospective analysis on our patients who underwent perforating keratoplasty because of Fuchs's corneal dystrophy during the last 10 years. All the patients were re-examined and the following details recorded: age, sex, refraction before surgery (from patients' records or lensometer readings of the patients' oldest distance spectacles), history of angle closure glaucoma and peripheral iridectomy, axial length, and anterior chamber depth before surgery.

Twenty-three patients (15 females and 8 males, 53 to 95 years old) were operated on. Eight of them had undergone an iridectomy because of an acute attack of angle closure glaucoma one to 30 years before the development of corneal oedema. An additional three patients had a very narrow angle when first examined by us, and therefore prophylactic iridectomy was performed during the keratoplasty. Thirteen eyes had axial length shorter than 24.2 mm (mean 21.59, SD 0.80 mm) and anterior chamber depth less than 3.4 mm (mean 2.4, SD 0.24 mm). The means in the general population for axial length and anterior chamber depth are considered 24.2 mm and 3.4 mm respectively.⁵ Seven had hyperopic refraction (mean 2.25, SD 1.34 dioptre). Only one

eye of each patient was considered in the calculations.

In summary, of the 23 patients 11 had problems related to angle closure glaucoma. The acute attack occurred in eight of them long before the clinical symptoms of Fuchs's dystrophy. This rules out the possibility that the attack was caused by the oedematous cornea crowding the angle. The probability that the corneal damage was caused by the acute rise of pressure and/or the iridectomy seems unlikely. In six of the eight patients corneal endothelial damage characteristic of Fuchs's endothelial dystrophy was present in the fellow eye which had not sustained an acute attack of angle closure glaucoma.

It is obvious from Pitts and Jay's series, and from the additional information presented in this report, that there is a high incidence of axial hypermetropia, shallow anterior chamber, and angle closure glaucoma in patients with Fuchs's corneal dystrophy. The clinical evidence suggests that there is no causal relationship in either direction, and it is likely that the association arises from a common factor leading to both conditions by genetic linkage.

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- 4 Wilson SE, Bourne WM. Fuchs's dystrophy. *Cornea* 1988; 19: 253–93.
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Topical beta blockers and serum lipoproteins

SIR,—With reference to the paper by West and Longstaff,¹ it was reassuring to read that topical timolol was found 'to have no significant adverse effect on serum lipoprotein levels'. However, another recent paper came to a different conclusion that topical timolol significantly reduced plasma high-density lipoprotein (HDL) levels.² The difference in the results of these two studies may be due to the following reasons.

(1) Coleman *et al*² studied normal, healthy volunteers while West and Longstaff¹ examined glaucoma patients. The effect of topical timolol on serum lipoproteins in elderly glaucoma patients (mean age 67.5 years) may be different from that in young, healthy subjects (mean age 35.2 years).

(2) It is well known that the compliance of patients with glaucoma drug therapy is often less than ideal.³ Since patient compliance with topical timolol appears not to have been objectively assessed in the study by West and Longstaff,¹ this may have affected the overall results.

(3) When testing for serum lipoproteins, two separate fasting blood samples, taken on different days, have been recommended to take account of the large intraindividual variations

Figure 1 T-2 dermatome herpes zoster.

Figure 2 T-2 dermatome herpes zoster.