Table 1 First choice treatment preferences of ophthalmologists in the United Kingdom for primary open-angle glaucoma

Choice	*Mild POAG*		*Moderate POAG*		*Severe POAG*	
	Number	*%*	*Number*	*%*	*Number*	*%*
Prostaglandin analogue	264	50.9	322	62.0	293	56.5
Nonselective beta-blocker	168	32.4	150	28.9	95	18.3
Selective beta-blocker	21	4.0	17	3.3	6	1.2
PA + NSBB[a]	0	0.0	19	3.7	64	12.3
Other topical medication	9	1.7	11	2.1	19	3.7
Observe	57	11.0	0	0.0	0	0.0
Surgery	0	0.0	0	0.0	42	8.1

POAG, primary open-angle glaucoma; PA, prostaglandin analogue; NSBB, beta-blocker.
[a]Separate or as combination topical medication.

Laser trabeculoplasty was not selected by any respondent as a first-choice option. However, argon laser trabeculoplasty is given by the AAO guidelines as an appropriate alternative to topical medications as initial therapy. With promising pilot studies[4,5] it will be interesting to see if selective laser trabeculoplasty becomes a first-choice treatment in the UK.

Prostaglandin analogues have become a popular first-line choice of treatment, especially given that the hypothetical patient was said to have been healthy and not had any cardiopulmonary disease. This popularity is presumably due to their established efficacy, good systemic side effect profile and convenient once daily dosing. Despite recent studies showing a similar efficacy of the currently available prostaglandin analogues[6] latanoprost remains by far the most popular.

It should be remembered that respondents' treatment choices may have been different had the initial IOP been higher or the hypothetical patient been of a different race. Even so, this study will enable other ophthalmologists, including those in training, to compare their treatment choices with others in their field, allowing for critical appraisal. It may also serve as a baseline for analysing future trends in POAG management and may be of use to clinicans dealing with hospital pharmacies and drug committees.

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Sir,

Influence of ethnic origin on the incidence of keratoconus and associated atopic disease in Asian and white patients

We read with interest the recently published study by Georgiou *et al*.[1] We would like to present the results of a similar retrospective study undertaken at Bradford Royal Infirmary (BRI).

Methods

All cases of newly diagnosed keratoconus patients seen in the Ophthalmology Department between September 1997 and December 2001 were analysed retrospectively using the videokeratography database. This included the vast majority of cases of keratoconus seen in the department during the analysed period—the clinical diagnosis on presentation was made by an ophthalmologist.

BRI is the only ophthalmology service in the city of Bradford (catchment population of 470 000) and receives all GP or optician (via GP) referrals of this type.

According to Census 2001, the ethnic background of population in Bradford is white 93.48%, Asian 4.49%, black 0.5%, Chinese 0.25%, and others 1.18%. The ethnic groups in the Asian population in Bradford are Pakistani (87%), Indian (7.3%), and Bangladeshi (5.7%).

The proportion of population other than white and Asian (ie 1.93%) was considered negligible for the purpose of this study.

Normally distributed data were analysed using Student's *t*-test for unpaired groups of patients. A significance level of $<5\%$ was chosen in all tests. Data are presented as mean $\pm$ standard deviation.

Results

In all, 197 new patients were diagnosed with keratoconus over this 4-year period. There were 130 Asians (69 men and 61 women) and 67 whites (49 men and 18 women).

The incidence rate was approximately 32.3 per 100 000 per year for Asians and 3.5 per 100 000 per year for whites. The relative incidence is 9.22–1.

Asian patients were significantly younger than white patients at presentation (mean age 23.0 ± 7.0 years *vs* 27.8 ± 8.1 years, $P<0.001$).

The first corneal graft was performed on 15 (7.06%) Asian patients and on four (5.9%) white patients.

Of those having grafts, Asian patients were significantly younger than white patients at the time of diagnosis (mean 20.8 ± 5.3 years *vs* 32 ± 4.9 years, $P<0.002$) and operation (mean 22.13 ± 5.6 years *vs* mean 33.5 ± 5.0 years , $P<0.002$).

Comment

Our study showed a relative incidence of keratoconus of 9.22–1 in Asian patients compared to white patients. This is comparable to the ratio of 7.5–1 in the study from Dewsbury,[1] where the ethnic distribution of the Asian population is similar to Bradford, predominantly of Pakistani extraction, and is much higher than in the Leicester study of Pearson *et al*[2] of 4.4–1 with a majority of Asian population of Indian extraction. None of the patients in our study admitted to a family history of keratoconus.

The Asian population in this study had a similar higher than average prevalence of consanguineous marriages as in the Dewsbury data,[1] therefore our results support the attractive postulate of the role of genetics in keratoconus.

There is evidence in the literature that prolonged contact lens wear may induce keratoconus in predisposed individuals, if worn over 4 years.[3] Further studies are needed to assess the causative role of difference in the duration of contact lens wear between different populations diagnosed with keratoconus. This is relevant because, for cultural reasons, the Asian population tends to prefer contact lenses to glasses.

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Sir,

Reply to I Cozma *et al*

We are pleased that Cozma *et al* have been able to support our finding (Georgiou *et al*[1]) of a higher incidence of keratoconus in Asian populations, particularly those from Pakistan.