

of the lens contributing to progressive angle crowding.<sup>10</sup>

Peripheral iridotomy eliminates pupillary block and argon laser peripheral iridoplasty addresses the residual angle closure.<sup>11</sup> Patients with appositional angle closure may go on to develop peripheral anterior synechiae (PAS) and synechial angle closure, even years after a successful iridotomy. Patients who underwent iridotomy should not be considered cured but should undergo periodic gonioscopic examination.

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A Llinas<sup>1</sup>, S Dorairaj<sup>1,2</sup>, JM Liebmann<sup>3,4</sup> and R Ritch<sup>1,5</sup>

<sup>1</sup>Department of Ophthalmology, Einhorn Clinical Research Center, The New York Eye and Ear Infirmary, New York, NY, USA

<sup>2</sup>Department of Surgery, Beth Israel Medical Center, New York, NY, USA

<sup>3</sup>Department of Ophthalmology, New York University, New York, NY, USA

<sup>4</sup>Department of Ophthalmology, Manhattan Eye, Ear and Throat Hospital, New York, NY, USA

<sup>5</sup>Department of Ophthalmology, New York Medical College, Valhalla, NY, USA

E-mail: ritcimd@earthlink.net

*Disclosure:* none

Supported by the Matthew and Lee Sabatine Research Fund of the New York Glaucoma Research Institute (New York, NY, USA)

*Eye* (2008) **22**, 597–598; doi:10.1038/sj.eye.6703088; published online 25 January 2008

Sir,

## Comment on 'A PAX6 gene polymorphism is associated with genetic predisposition to extreme myopia'

Tsai *et al*<sup>1</sup> carried out a case–control association study in 340 Taiwanese medical students, and reported an association between presence of 'extreme myopia' (< –10.00 D) and genotype at SNP rs667773 (also known as IVS9-12C to T) in the PAX6 gene. No association was found between 'high myopia' (< –6.00 D) and rs667773 genotype.

rs667773 has a minor allele frequency (MAF) 4% in the United Kingdom; 7% in CEPH Europeans; 11% in Japan, and has been suggested to be a neutral polymorphism unlikely to cause an overt phenotype such as aniridia.<sup>2,3</sup> No common (neutral) PAX6 variants have been associated with myopia susceptibility.<sup>4,5</sup> We suggest that until replicated, the findings of Tsai *et al* should be interpreted with caution for the following reasons.

First, the sample size for the subgroup analysis was limited ( $n = 67$  extreme myopes; 85 controls). Thus, the risk of a type I error was high. The moderate heterozygosity of rs667773 exacerbates this difficulty (hence the very low counts of TT genotypes).

Second, the issue of population stratification was not considered. The MAF of rs667773 in the study of Tsai *et al* was 17%, suggesting that T allele is more common in Taiwanese than in hitherto studied populations. This wide variability in allele frequency could easily lead to a false–positive association if refractive error also varied across the region from which the subjects were sampled.

Third, we note that the higher-risk C allele is more common in Europeans than in East Asians, whereas extreme myopia is more common in East Asia than in Europe. If rs667773 is an important myopia susceptibility variant, one would expect the opposite relationship.

Fourth, according to the common disease, common variant hypothesis, for a high-risk variant to rise to a frequency > 80%, it would have to exert a strong selective advantage. No such advantage has been attributed to the C allele of rs667773.

Finally, unless the genetic risk factors for high and extreme myopia are distinct, the lack of association with high myopia is unexpected, especially since power was greater to detect an association with high myopia than extreme myopia.

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T Zayats<sup>1</sup>, JA Guggenheim<sup>1</sup>, CJ Hammond<sup>2</sup> and TL Young<sup>3</sup>

<sup>1</sup>School of Optometry and Vision Institute, Cardiff University, Cardiff, Wales, UK

<sup>2</sup>Twin Research and Genetic Epidemiology Unit, St Thomas' Hospital, London, UK

<sup>3</sup>Duke University Center for Human Genetics, Durham, NC, USA

E-mail: guggenheim@Cardiff.ac.uk

*Eye* (2008) **22**, 598–599; doi:10.1038/sj.eye.6703096; published online 25 January 2008

Sir,  
**Reply to Zayats *et al***

We thank Zayats *et al* for their comments and interests in our recently published article.<sup>1</sup> They were concerned with the different effect of PAX6 polymorphism in myopia between Taiwan and Europe, the reason of lack of association with high myopia, and the risk of a Type I error in our study. We would like to reply their comments as follows.

More and more evidences support that myopia is caused by both genetic and environmental factors and possibly their interactions.<sup>2</sup> Besides the interactions with environment, owing to multiple genes with small effects, genetic heterogeneity and phenotypic complexity, the study of the genetics of myopia poses a complex challenge and may obtain different results in different countries. Hence, the effects of PAX6 polymorphisms in myopia are likely to be different between Taiwan and Europe because of different environment and race.

Prolonged near visual tasks is an important environmental influence in myopia in Taiwan: individuals with higher education have a higher prevalence of myopia than people in the general population.<sup>3,4</sup> However, among the students in the same class of the same university, who were previously performing similar near visual tasks, their severity of myopia varied widely. For example, the first-year medical students in our China Medical University, although most of them are among mild-to-high myopia, there are extreme myopia. Because they did similar near visual tasks, we assume that their near works resulted in mild-to-high myopia, and there were genes predisposing some students to develop high-to-extreme myopia. Hence, the lack association of PAX6 with high myopia in our study may be due to the distinction in genetic risk factors for high and extreme myopia, or part of high myopia students are caused by their near works only, which is not related to PAX6 polymorphism, suggesting that high myopia can be caused by genetic or environmental factors separately or through their interactions.

The maximum chance of making a Type I error is denoted by alpha. Because our *P*-values are either 0.002 or less than 0.001, the probability of making a Type I error is low.

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Y-Y Tsai, C-C Chiang, L Wan and F-J Tsai

Department of Ophthalmology, China Medical University Hospital, Taichung, Taiwan, China  
E-mail: elsa10019@yahoo.com.tw

*Eye* (2008) **22**, 599; doi:10.1038/sj.eye.6703097; published online 25 January 2008

Sir,  
**Bilateral *Candida* chorioretinitis following etanercept treatment for hidradenitis suppurativa**

Hidradenitis suppurativa (HS) is an inflammatory disease with chronic acneiform infection of the cutaneous apocrine glands. Etanercept, an anti-tumor necrosis factor- $\alpha$  (TNF- $\alpha$ ) agent, is effective in the management of HS.<sup>1</sup> Infectious complications have been described following treatment with etanercept,<sup>2</sup> including uveitis.<sup>3</sup>

## Case report

A 48-year-old woman was referred to our department because of bilateral blurred vision and floaters for 2 days. She had been hospitalized 35 days before due to a secondary amyloidosis after 8 years of HS, which was being treated with prednisone 5 mg daily and subcutaneous 25-mg etanercept injections every 4 days for 3 months. During the hospitalization, she developed a superficial phlebitis in her left arm (where she had a catheter) followed by a septicemia, with positive cultures for *Candida albicans* in the catheter and in the hemocultures. She was treated with caspofungine and etanercept removal.

Baseline visual acuity was 20/60 in the right eye and 20/40 in the left eye. Ophthalmic exploration showed one yellow-white chorioretinal juxtafoveal lesion with perilesional hemorrhage in both eyes and a similar parafoveal lesion in the left eye, with neither vitreous haze nor cells (Figure 1a). Chest X-ray, tuberculin skin test, and serologic tests were normal or negative. The association of these ocular and microbiologic findings drove us to the diagnosis of *Candida* chorioretinitis, which improved after systemic fluconazol, with no active