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CORRESPONDENCE

Sir,

A highly sensitive technique for imaging and effective monitoring of staining of the ocular surface defects

Recently, a novel technique of the documentation of ocular surface staining was reported, where the basic principles of fluorescein angiography were applied to obtain a detailed pattern of corneal staining.[1,2] We present a series of photographs demonstrating the potential of the technique to image a wider variety of ocular surface disorders and demonstrate the efficiency of the method in follow-up assessments.

Photographs of two patients with Thygeson's disease (cases 1 and 2) (Figure 1a–e) and one with atopic keratoconjunctivitis (AKC) (Figure 2a–c) are demonstrated in this report. Images were taken before and 1 min after the application of 2% fluorescein with a digital fundus camera (FF 450Plus IR, Carl Zeiss Meditec, Jena, Germany) using a combination of exciter and barrier filters (standard settings for fluorescein angiography[2]).

The technique allowed high-contrast visualisation of the distinctive stellate staining pattern of subepithelial lesions in both cases of Thygeson's disease (Figure 1a, b, e, and f) that was not visible on examination with a slit lamp using cobalt blue light and a yellow filter. Follow-up images taken with fluorescein angiography settings of the fundus camera from the patient treated with 0.2%

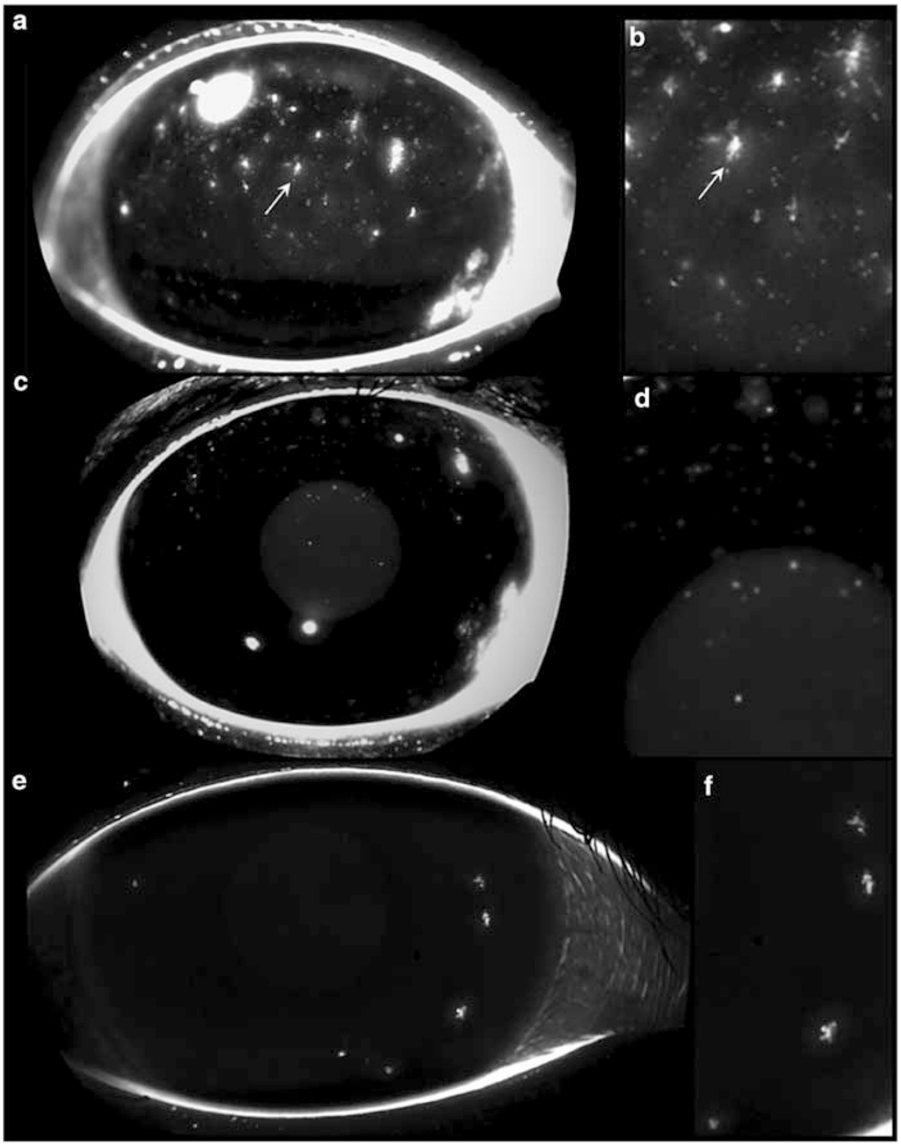

Figure 1 Imaging of Thygeson's superficial punctate keratitis using exciter and barrier filters of the fundus camera. Cases 1 and 2 (a–d, e and f, respectively) following the application of 2% fluorescein sodium. Case 1: images obtained from the right eye (a and b) before and (c and d) 10 days after topical treatment with ciclosporin ointment; (b) and (d) are high magnification of the images of (a) and (c), respectively. Multiple areas of stellate staining (arrows) are visible on the image obtained before treatment. Case 2: (e) photograph taken from the right eye; (f) high magnification of the image of (e).

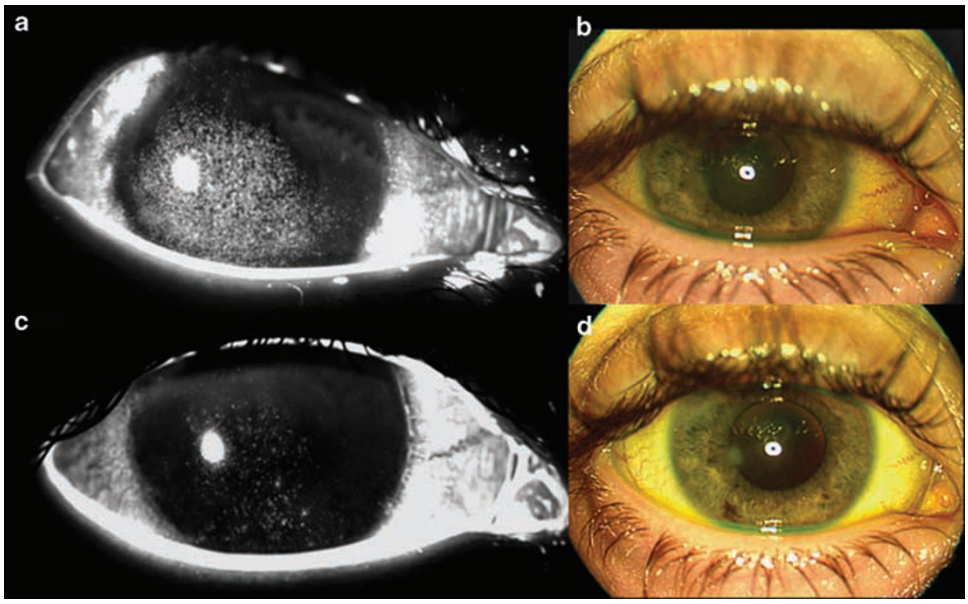

Figure 2 Case 3. Photographs of the right eye of the patient with exacerbation of atopic keratoconjunctivitis obtained (a and b) before and (c and d) four days following treatment; (a and c) images taken using exciter and barrier filters of the fundus camera; (b and d) colour fundus camera images.

ciclosporin ointment (Case 1) (Figure 1c and d) documented mostly discrete scattered dots without well-defined stellates and a few large foci of staining in the paracentral cornea (Figure 1c).

Photograph of the right eye taken from the patient with exacerbation of AKC at the first visit showed high-contrast corneal punctate staining and staining of the paracentral larger epithelial defect (Figure 2a), which were difficult to visualise with white (Figure 2b) and blue light. The images obtained on the fourth day of treatment documented significant reduction in punctate fluorescein corneal staining (Figure 2c).

To our knowledge, this is the first report demonstrating the ability of the method to visualise the stellate pattern of staining in Thygeson's disease in high contrast and to accurately monitor dynamic changes in fluorescein staining.

Further work is required to standardise this method for use in diagnosis and follow-up assessments.

Acknowledgements

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Sir,

Comment on ocular manifestations of crush head injury in children

The article by Gnanaraj *et al*[1] contains inconsistencies, inaccurate statements, and misleading conclusions mandating clarification.

- The first case reports associating retinoschisis and perimacular retinal folds with child abuse were published in 1986 and 1988, respectively.[2,3] However, Group 2 by Gnanaraj *et al*[1] was extracted from a biased sampling of autopsies occurring between 1982 and 1989 tabulated by Gilliland *et al*.[4] How can ocular findings be assessed when they had not yet been described in the literature?