Eye (2017) 31, 1380–1382

www.nature.com/eye

CORRESPONDENCE

Sir,
An alternative method for upper and lower conjunctival fornix measurement

We read with interest the recent article by Jutley *et al*[1] describing a method of objective assessment of conjunctival fornix depth using a custom-made re-usable instrument created by the authors.

We agree wholeheartedly with the authors regarding the value of measuring the fornix depth in cases of cicatrising eye disease, both for assessing the degree of scarring and measuring progression in order to optimize management. Measurements compared to ethnically equivalent normal values (as described in this study) could also facilitate the diagnosis of giant fornix syndrome.[2]

We note that the results with this study's custom device are comparable to previous studies using different devices, and that the authors feel that the type of device used is less important than the familiarity of the user with the technique.

We suggest an alternative measuring technique using a piece of equipment that is already readily available, cheap and disposable: Medline's 6″/15 cm flexible plastic ruler that accompanies surgical skin markers in sterile, single-use packs. We advocate instilling local anaesthetic and trimming the ruler at the 0 mm gradation and alongside the length markings before guiding the device into the centre of the apex of the fornix (Figure 1), with the patient in down-gaze for the superior fornix and up-gaze for the inferior fornix, as per the methods described in the authors' study. The flexible nature of the ruler ensures it conforms to the curvature of the globe, providing comfortable, safe and accurate measurement.

The patient in Figure 1 has symptoms and signs consistent with giant fornix syndrome affecting his left eye. The image demonstrates that the superior fornix is 4 mm deeper on the left side compared with the right side, confirming the diagnosis.

Speed of reading is discussed in the study, with 2 mm gradations embedded within the authors' custom device with red marks at 10 and 20 mm. Similarly, this ruler is quick to read, with individual marks at each millimetre and longer marks at each 5 and 10 mm increment.

Figure 1 Superior fornix measurement using sterile flexible plastic ruler.

In summary, we propose that the fornix can be accurately and safely measured using an inexpensive, easily available, convenient, sterile, and disposable device.

Conflict of interest

The authors declare no conflict of interest.

References

1 Jutley G, Carpenter D, Hau S, Booth D, Jasim HA, Tay E *et al.* Upper and lower conjunctival fornix depth in healthy white caucasian eyes: a method of objective assessment. *Eye* 2016; **30**: 1351–1358.
2 Rose GE. The giant fornix syndrome: an unrecognized cause of chronic, relapsing, grossly purulent conjunctivitis. *Ophthalmology* 2004; **111**: 1539–1545.

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Eye (2017) **31,** 1380; doi:10.1038/eye.2017.101;
published online 16 June 2017

Sir,
Response to: 'An alternative method for upper and lower conjunctival fornix measurement'

We appreciate the authors' interest in our article. We're pleased to hear that a disposable ruler could be a possible alternative to depth measurers made of PMMA. It would be useful to see validation of the measurements taken with this disposable ruler, by interobserver and intraobserver reliability data. Confirming repeatability and reproducibility of the measurements with each device is essential, before recommending the device as an accurate alternative.

One advantage of PMMA fornix depth measurers[1,2] is that they are rigid, therefore reproducibility and repeatability are high. With a flexible plastic ruler, reliably measuring upper fornix depth may be less easy, as one wonders if the ruler may bend to a variable degree over the globe and under the eyelid, potentially giving slightly different measurements depending on the technique and the user.

Conflict of interest

The authors declare no conflict of interest.

References

1 Jutley G, Carpenter D, Hau S, Booth D, Jasim HA, Tay E *et al.* Upper and lower conjunctival fornix depth in healthy white caucasian eyes: a method of objective assessment. *Eye* 2016; **30**: 1351–1358.
2 Khan IJ, Ghauri AJ, Hodson J, Edmunds MR, Cottrell P, Evans S *et al.* Defining the limits of normal conjunctival fornix anatomy in a healthy South Asian population. *Ophthalmology* 2014; **121**: 492–497.