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CORRESPONDENCE

Comment on: "Measuring changes in Schlemm's canal and trabecular meshwork in different accommodation states in myopia children: an observational study"

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To the Editor:

We read with interest the article "Measuring changes in Schlemm's canal and trabecular meshwork in different accommodation states in myopia children" by Xiang et al. [1]. We congratulate the authors on their elegant description of changes in Schlemm canal (SC) length and cross-sectional area (CSA) associated with accommodation in 34 children aged 7–14 years with myopia. However, we would like to point out that this is not the first report of these changes, and that it is not limited to children with myopia. We demonstrated earlier that in children aged 4–16 years with healthy eyes, SC diameters and CSA as well as TM length and other iridocorneal angle parameters increase with accommodative effort [2]. Our analysis included 12 eyes with myopia ranging from −4.5 to −0.125DS and 29 with emmetropia or hypermetropia ranging from 0 to +7.25DS, and we observed that SC-CSA was smaller with increasing hypermetropia. Xiang et al. report that due to insufficient OCT penetration, it was not possible to measure the ciliary muscle thickness at 1 mm from the scleral spur (CM1). However, in our work we demonstrated a significant increase in CM1 with accommodative effort [2]. We also explored the effect of childhood lensectomy on SC-CSA with and without accommodative effort [3]. We observed that horizontal SC diameter and SC-CSA are significantly smaller in post-lensectomy than in healthy eyes. In post-lensectomy eyes, accommodative effort does not increase SC dimensions [3]. The mechanism is different from the one reported by Xiang et al., who administered tropicamide to paralyse the ciliary muscle [1]. After lensectomy, ciliary muscle contraction in response to attempted accommodation is preserved, but SC response is reduced or absent, possibly due to post-surgical inflammatory and mechanical changes leading to trabecular meshwork damage and stiffness. We agree with Xiang et al. that smaller SC-CSA may reflect a reduction in outflow facility and contribute to the development of glaucoma.

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Compliance with ethical standards

Conflict of interest The author declares that he has no conflict of interest.

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