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LETTER

Comment on: "Angle Kappa is Not Correlated with Patient-Reported Outcomes After Multifocal Lens Implantation" [Letter]

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Dear editor

We read "Angle Kappa is Not Correlated with Patient-Reported Outcomes After Multifocal Lens Implantation" by Liu et al, which analyzes the impact of angle kappa on patient-reported outcomes after multifocal intraocular lens (MIOL) implantation.[1]

We noted the omission of a critical source reference that significantly contributes to the understanding of this debate and topic. In the Journal of Refractive Surgery Dec. 2023, we published "Angle Kappa Influence on Multifocal IOL Outcomes". This study examines MIOL patient-reported outcomes in relation to preoperative angle kappa in a cohort of 26,470 eyes.[2]

We appreciate the authors for reproducing and validating our findings by utilizing the Pentacam "chord length" instead of the Orbscan kappa displacement distance to measure angle kappa. Their study, mirroring our conclusions, confirms that angle kappa lacks significant correlation with patient-reported outcomes and cannot be used as a criterion for MIOL candidacy. We demonstrated that preoperative angle kappa did not have a predictive clinical impact on postoperative MIOL visual outcomes, refractive accuracy, subjective patient satisfaction at near, intermediate and far distance, nor with the likelihood of recommending an MIOL procedure to friends and relatives.[2] Our study also noted a larger angle kappa in right vs. left eyes. Liu et al add validity to our existing findings[2] and confirms, along with several previous studies,[3–9] that angle kappa as a single variable cannot be used to determine MIOL candidacy. The novelty of the study by Liu et al lies in reaching the same conclusion with angle kappa measurements taken by Pentacam and adding photic phenomena data.

The authors state "as angle kappa and chord length are used interchangeably in the refractive literature, the chord length is referred to as angle kappa in this manuscript".[1] While the Pentacam chord length is a good proxy for angle kappa, this chord, and other measures of angle kappa in mm are not interchangeable, even though those terms are often wrongfully substituted. For example, the Pentacam angle kappa chord length of 0.41 mm in Liu's study is significantly shorter than the Orbscan kappa displacement distance of 0.63 mm in our study.

In summary, Liu et al reproduced our large cohort study's conclusions and they bring further evidence that angle kappa, as an independent variable, cannot be used as a selection criterion for MIOL candidacy. Further discussion of key previous studies on this topic would have enhanced the depth of their analysis and improve readers' comprehension of the growing body of evidence concluding that angle kappa does not significantly impact postoperative MIOL outcomes.

Disclosure

The authors have no conflict to disclose and no financial interest in the subject matter or materials presented herein in this communication.

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