

Comment on “Comparison of visual acuity and optical quality between higher-order aspheric monofocal and standard intraocular lenses”

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Dear Editor,

We read with great interest the recently published study titled “Comparison of visual acuity and optical quality between higher-order aspheric monofocal and standard intraocular lenses” by Janekova *et al*^[1]. While the study provides valuable insights into the performance of enhanced monofocal intraocular lenses (IOLs), we would like to highlight some potential limitations that merit further discussion.

The study design, which involved implanting different lenses in fellow eyes of the same patients, introduces inherent biases related to neuroadaptation and interocular comparison. Patients may unconsciously favour one eye over the other, which could impact subjective visual performance assessments. A contralateral comparison may not always accurately reflect real-world scenarios where both eyes receive the same lens type. The study’s exclusion criteria, particularly the restriction on corneal astigmatism greater than 0.75 diopters, limit its generalizability. In routine clinical practice, many patients undergoing cataract surgery present with higher levels of astigmatism, requiring toric IOLs or additional astigmatic correction. The findings of this study may not extend to such

populations.

The study’s sample size (22 patients) is relatively small, which raises concerns about the statistical power of the findings. While significant differences were observed in intermediate visual acuity outcomes, some borderline statistical differences in defocus curve and near vision performance suggest that a larger sample size might have provided more robust conclusions^[2].

Contrast sensitivity outcomes were reported as statistically similar between both groups, yet more detailed analysis under real-world conditions, such as glare conditions or low-contrast text reading, would have been beneficial in evaluating functional visual performance more comprehensively^[3].

The study focuses heavily on quantitative visual acuity metrics but does not sufficiently explore subjective patient satisfaction in detail. While a questionnaire was used, an expanded qualitative assessment of visual disturbances, night vision issues, and patient preference for either lens would have provided a more holistic understanding of patient experience^[4]. In conclusion, while the study offers valuable contributions to the evolving field of enhanced monofocal IOLs, addressing these limitations in future research would help strengthen the clinical relevance of such findings. We appreciate the opportunity to engage in this discussion and look forward to further studies on this topic.

ACKNOWLEDGEMENTS

Conflicts of Interest: Bandyopathy A, None; Chaurasiya SK, None.

REFERENCES

- 1 Janekova A, Polachova M, Piñero DP, *et al*. Comparison of visual acuity and optical quality between higher-order aspheric monofocal and standard intraocular lenses. *Int J Ophthalmol* 2025;18(4):598-605.
- 2 Serdar CC, Cihan M, Yücel D, *et al*. Sample size, power and effect size revisited: simplified and practical approaches in pre-clinical, clinical and laboratory studies. *Biochem Med* 2021;31(1):010502.
- 3 Delgado-Rodríguez M, Llorca J. Bias. *Journal Epidemiol Community Heal* 2004;58(8):635-641.
- 4 Rothman KJ, Gallacher JE, Hatch EE. Why representativeness should be avoided. *Int J Epidemiol* 2013;42(4):1012-1014.

Authors Reply to the Editor

Dear Editor,

Thank you for forwarding the comment on our recent publication “Comparison of visual acuity and optical quality between higher-order aspheric monofocal and standard intraocular lenses”.

We have carefully reviewed the comments submitted by Mr. Suraj Kumar Chaurasiya and Ms. Ankita Bandyopadhyay. While we appreciate their interest in our work, we believe that most of the concerns raised have already been acknowledged and addressed in the Discussion section of our original manuscript.

Specifically: 1) The potential influence of neuroadaptation and interocular bias in contralateral eye studies is a well-known limitation and was explicitly discussed. 2) The decision to exclude patients with significant corneal astigmatism was intentional, in order to eliminate confounding factors and

allow for a more precise comparison of lens performance. We agree that findings may not be generalizable to all patient populations, and this is clearly stated in our limitations. 3) Functional assessments under challenging visual conditions, while valuable, were beyond the scope of our study but represent an important direction for follow-up research. 4) Subjective visual outcomes were indeed included through a patient questionnaire, although we agree that expanded qualitative evaluation may further enrich future studies.

We remain open to constructive discourse and welcome ongoing engagement from the ophthalmology research community.

David P. Piñero

On behalf of all authors

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