

Insights and Considerations for “Higher Intraocular Levels of Inflammatory Factors are Related to Retinal Vascular and Neurodegeneration in Myopic Retinopathy” [Letter]

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Dear editor

We read with great interest the study by Zeng et al¹ which explores the association between elevated intraocular inflammatory cytokines and myopia-induced retinal degeneration. The study's comprehensive analysis of inflammatory factors and their correlation with retinal parameters provides valuable insights into the pathogenesis of myopic retinopathy. Nevertheless, the following specific issues warrant further discussion:

1. Absence of a Non-Myopic Control Group: The study lacks a non-myopic (emmetropic) control group, which limits the ability to establish baseline inflammatory cytokine levels. Including emmetropic controls would clarify whether cytokine changes are unique to myopic pathology or part of normal variations.
2. Causality Between Inflammation and Degeneration: While the study highlights correlations between inflammatory cytokines and retinal degeneration, a causal relationship is not established. Longitudinal studies or animal experiments with cytokine modulation could help determine if inflammation drives degeneration or occurs as a secondary response.
3. Covariates and Systemic Inflammation: The authors excluded subjects with systemic inflammatory diseases, but systemic inflammation markers were not measured. Exploring systemic factors (eg, CRP or IL-6 in plasma) could reveal whether intraocular inflammation is part of a systemic inflammatory response.
4. Impact of ICL Surgery on Cytokine Levels: Since aqueous humor was collected prior to ICL implantation, the potential influence of surgical stress on cytokine levels should be addressed. Including a preoperative validation group or samples at different time points would help confirm that elevated cytokines are linked to myopia progression rather than surgical preparation.

Conclusion

The study provides meaningful insights into the inflammatory microenvironment in myopic retinopathy. Addressing the above limitations, particularly through inclusion of emmetropic controls and exploration of systemic factors, would further strengthen the study's findings and their clinical relevance.

Disclosure

The authors report no conflicts of interest in this communication.

Reference

1. Zeng L, Yang Z, Pan W, et al. Higher Intraocular Levels of Inflammatory Factors are Related to Retinal Vascular and Neurodegeneration in Myopic Retinopathy. *J Inflamm Res*. 2024;17:10889–10900. doi:10.2147/JIR.S484338

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