Clinical Optometry

Dovepress
Taylor & Francis Group

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LETTER

Comfort and Ocular Surface Impact of Verofilcon A Daily Disposable Contact Lenses in Satisfied Senofilcon A Daily Disposable Lens Wearers: A Prospective Non-Interventional Study [Letter]

Nir Erdinest[1], Naama Bura[2]

[1]Departments of Ophthalmology, Hadassah-Hebrew University Medical Center, Jerusalem, Israel; [2]Faculty of Life Sciences, School of Optometry and Visual Science, Bar Ilan University, Ramat Gan, Israel

Correspondence: Nir Erdinest, Hadassah Hebrew University Medical Center, Ophthalmology Department, Ein Kerem Campus, Jerusalem, Israel, Tel +972-2-6778641, Fax +972-2-6776324, Email nir.erdinest@mail.huji.ac.il

Dear editor

We read with great interest the recent article evaluating comfort and ocular surface parameters following a switch to verofilcon A daily disposable contact lenses among previously satisfied senofilcon A wearers.[1] The study addresses an important clinical question, particularly as it examines the implications of refitting with an alternative lens modality in a population of otherwise satisfied wearers with no significant subjective complaints. The integration of subjective questionnaires with objective assessment using the C.DIAG platform is commendable. Nonetheless, certain methodological limitations warrant further discussion.[1]

While the primary aim of the study was to evaluate changes in comfort following contact lens refitting, the lack of detailed information regarding participants' prior contact lens wear history represents a notable limitation, as it may introduce substantial variability in baseline ocular surface status. Although participants were classified as healthy and free of dry eye at baseline, it is well established that even asymptomatic contact lens wearers may exhibit subclinical alterations, such as reduced goblet cell density (GCD), that are not reliably detected by standard clinical assessment. Indeed, a prospective longitudinal study demonstrated that contact lens wear leads to a significant reduction in goblet cell density as early as the first months of wear, with a more pronounced decline in symptomatic subjects. These findings indicate that GCD reduction is a cumulative, duration-dependent process reflecting progressive conjunctival tissue remodeling. It follows that participants with an extended history of contact lens wear may have entered the study with an already-diminished GCD relative to those with shorter wearing histories.[2] However, the present study applied only a minimal prior wear threshold of more than four weeks without further stratification by duration, leaving substantial inter-participant baseline variability unaccounted for. Failure to control for this variable may have introduced response heterogeneity, thereby compromising the ability to attribute observed outcomes exclusively to the lens type under investigation and limiting the generalizability of the findings.[2] A further methodological concern relates to environmental factors that may have influenced the outcomes yet were not incorporated into the study's analytical framework.

In addition to conjunctival alterations, long-term contact lens wear has also been shown to induce structural changes at the level of the cornea, further contributing to inter-individual baseline variability. A controlled prospective study demonstrated that long-term contact lens wearers exhibit increased corneal curvature and significantly elevated indices of corneal surface irregularity, including the surface regularity index and surface asymmetry index, compared with non-wearers.[3] These indices were significantly higher in contact lens wearers, indicating greater corneal surface irregularity. Notably, such irregularities were observed even after discontinuation of contact lens wear for at least two weeks prior to

https://doi.org/10.2147/OPTO.S619170
Received: 23 April 2026
Accepted: 6 May 2026
Published: 9 May 2026

examination. Therefore, the absence of detailed consideration of prior contact lens wear duration may introduce baseline variability among participants that is not accounted for in the analysis.

Although measurements were conducted under controlled clinical conditions, including standardized temperature and humidity, the ambient environmental conditions experienced during participants' daily activities were neither monitored nor accounted for. Environmental variables are well-recognized determinants of ocular surface health, yet despite having been collected via questionnaire, they do not appear to have been integrated into the study's analytical framework. Accumulating evidence demonstrates that ambient temperature and relative humidity exert significant effects on both objective clinical signs and subjective symptoms of dry eye disease. Specifically, exposure to lower temperatures has been associated with symptom exacerbation, increased corneal staining and elevated tear osmolarity-a particularly sensitive biomarker of ocular surface homeostatic disruption.[4]

Corroborating this, a prospective clinical investigation reported that occupational environments characterized by low relative humidity, prolonged digital screen exposure, and air conditioning significantly impaired tear film stability, as reflected by reductions in non-invasive keratograph break-up time (NIKBUT) and Schirmer test values.[5]

Of particular relevance, the Tear Film and Ocular Surface Society (TFOS) International Workshop on Contact Lens Discomfort identified external environmental factors as one of the two principal axes underlying contact lens discomfort, alongside lens-related factors.[6,7] Variables including ambient humidity, air quality, and blink dynamics are recognized as directly modulating the lens–ocular surface interface.[6,7]

In light of the foregoing, the omission of environmental factors from the analytical framework represents a potential source of confounding, insofar as observed changes in comfort and ocular surface parameters may reflect ambient environmental variation[6,7] rather than differences between lens types. Consequently, the capacity to attribute observed outcomes specifically to the lens type under investigation is substantially constrained.

In conclusion, although this study offers valuable preliminary evidence regarding the comfort and ocular surface compatibility of verofilcon A lenses, the absence of detailed characterization of participants' prior wear history and the exclusion of environmental factors from the analytical framework represent meaningful limitations that constrain both the interpretation and the generalizability of the findings. Future investigations should incorporate stratification by cumulative lens wear duration and systematically integrate environmental covariates into their statistical models, so as to more rigorously isolate the independent contribution of lens type to the observed outcomes.

Funding

The authors of this letter did not receive any specific grant from funding agencies in the public, commercial, or not for profit sectors.

Disclosure

The authors have no conflicts of interest to declare for this communication.

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