Comparison of central corneal thickness measurement with Sirius Topographer and Nidek Axial Length Scan

Sir,

I read with interest the article by Duman *et al*.[1] on "Comparison of anterior segment measurements using Sirius Topographer® and Nidek Axial Length-Scan® (AL-scan) with assessing repeatability in patients with cataract" (mean age, 71.79 ± 7.91 years). We would like to mention a few points in relation to central corneal thickness (CCT) measurement in their study.

The study reports mean CCT of 523.46 ± 40.58 μm with AL-scan and 545.32 ± 41.38 μm with Sirius Topographer in 43 eyes, for the first measurement. Using the same devices, we found lower mean CCT with AL-scan and Sirius Topographer, which was 507.43 ± 33.54 and 512.08 ± 33.1 μm, respectively, in 127 healthy eyes (mean age, 35.91 + 7.7 years).[2] The present study[1] found a mean difference of 19.759 for CCT measurement and poor agreement with 95% limits of agreement (LoA) to be 17.220–22.299 (P = 0.00) between the 2 devices. Our study reported a mean difference of − 4.6 μm for CCT and high level of agreement (95% LoA: -12.2 to 2.9, P = 0.26) between the 2 devices.

One of the reasons for the significant mean difference in CCT between the 2 devices in the present study could be because of the fact that the measurements were taken between 10 am and 5 pm which could have affected the diurnal variation in CCT, when compared with our study where the CCT measurements were obtained between 3 pm and 5 pm. Furthermore, the difference in mean CCT between the 2 studies could be because of the difference in age, sample size, and ethnicity[3] of the population studied.

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Conflicts of interest

There are no conflicts of interest.

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References

1. Duman R, Çetinkaya E, Duman R, Dogan M, Sabaner MC. Comparison of anterior segment measurements using sirius topographer® and nidek axial length-scan® with assessing repeatability in patients with cataracts. Indian J Ophthalmol 2018;66:402-6.
2. Mansoori T, Balakrishna N. Repeatability and agreement of central corneal thickness measurement with non-contact methods: A comparative study. Int Ophthalmol 2017; doi: 10.1007/s10792-017-0543-1. [Epub ahead of print].
3. Shimmyo M, Ross AJ, Moy A, Mostafavi R. Intraocular pressure,

goldmann applanation tension, corneal thickness, and corneal curvature in Caucasians, Asians, hispanics, and African Americans. Am J Ophthalmol 2003;136:603-13.

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