Optic disc topography in normal Indian eyes using spectral domain optical coherence tomography

Dear Editor,
Normative data of the ocular structures in different populations carries epidemiological importance and helps one understand some disease processes in different regions of the world. For this reason, we want to congratulate Mansoori et al., for adding the normative data of the optic nerve head (ONH) analyses to the literature in an Indian population. We want to make a contribution to the article.

Besides aiming to assess the normative data in the Indian population, the authors also aimed to explore the correlation between some ONH parameters with age, gender, and refractive errors of the participants. The authors reported insignificant relations between the ONH area and refractive errors, and between the ONH area and the cup / disc ratio. However, the inclusion criteria of the study limited refractive errors below ± 3 diopter (D) for spheric errors and below ±1.5 D for cylindric errors. The authors reported that the mean spherical refractive error was 0.97 ± 0.8 D. In a previous study, the mean refractive error was 0.2 ± 1.82 D in the control group, which included 205 healthy subjects. Therefore, the standard deviation of refractive errors in Mansoori's study was very much under the deviation in healthy subjects. We know that limiting the numerical values to a narrow range could mask the significant correlations. Refractive errors affected the ocular biometric parameters and limiting the refractive errors also meant limiting the biometric parameters.

Table 1 shows three groups with two variables. Groups (1,2,3) includes 7,8,7 values for each variable. The total number of values is 22. The spearman correlation coefficients between the two variables are - 0.115 (P = 0.805), 0.346 (P = 0.402), and - 0.487 (P = 0.268) for groups 1 to 3, respectively. Each

| Variable | Group 1 | Group 2 | Group 3 |
|----------|---------|---------|---------|
| Variable 1 | 2,2,3,4,3,4,2,4 | 3,5,6,4,2,5,4,3 | 6,8,5,6,7,6,8 |
| Variable 2 | 15,16,14,12, | 18,17,19,21, | 22,23,25,27, |
|            | 16,10,15 | 18,20,19,17 | 20,19,18 |
correlation is statistically insignificant. However, if we include all the values together in the statistical analysis, the spearman coefficient shows a significant correlation, 0.676 (P = 0.001). In this example, Group 2 may represent the refractive errors between ± 3 D, and group 1 and group 3 may represent greater refractive errors.

If the values are limited in such ways, the number of the participants must be increased, in order to increase the reliability of the results. In contrast to the results of Mansoori’s study, hyperopic subjects will be expected to have smaller disc areas than myopic and emmetropic subjects, and a significant negative correlation between the disc areas and refractive errors. We want to kindly request the authors to include healthy subjects with refractive errors greater than ± 3 D in the study and re-investigate the correlation again.

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