LETTER TO THE EDITOR

Central corneal thickness measurement with Cirrus HD-OCT and Topcon SP-3000P

Medición del espesor corneal central con Cirrus HD-OCT y Topcon SP - 3000P

Dear Editor,

We read with great interest the article by Calvo-Sanz et al. comparing specular microscopy (SM) with OCT and ultrasound pachymetry (USP).1

We would like to congratulate with the authors for their excellent paper, because even if corneal thickness (CT) is not the only parameter involved in the reliability of intraocular pressure measurement,2 a precise CT measurement is very important both in establishing the corneal health3 and in evaluating the intraocular pressure.4 Their paper confirms our belief that SM measurements are in absolute thinner compared to other devices.5,6

In fact in a previous paper De Bernardo et al. found that CT obtained with this device was thinner than the measurements obtained with Pentacam, and they proposed a regression formula to make the measurements comparable.7 We agree with the authors that USP measurements depend on the exact axial placement of the probe making the reproducibility of measurements dependent on examiner expertise.8

Concerning the difference between USP and SM, the authors performed the USP after the instillation of topical anesthesia utilizing a combination of 0.1% tetracaine and 0.4% oxybuprocaine.

Theoretically this could have given some differences, because it is true that in a previous published paper it has been demonstrated no influence on CT and volume measurements with the instillation of oxybuprocaine eye drops,9 but tetracaine eye drops have been described to cause corneal thickening.10

So in conclusion we would like to suggest that for future works concerning the comparison of different devices the use of oxybuprocaine, better if preservative free, instead of tetracaine should be advisable.

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References


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