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Comparison of swept-source optical coherence tomographer (SS-OCT) and partial coherence interferometry (PCI): Ocular biometry and repeatability**Choun-ki Joo, Mihyun Choi, Minji Kang, Jihye Lee, Youngju Ahn, Woong-Joo Whang and Young-sik Yoo**
Catholic University of Korea, South Korea

Introduction & Aim: The third-generation formulas require the information of the anterior corneal power (K) or the anterior corneal radius of curvature (R) as measured by keratometry and of the axial length (AL) as measured by biometry. This study aims to evaluate the repeatability of the SS-OCT measurements (Argos, Movu, Inc.) and to compare the AL, anterior chamber depth (ACD) and K measurements with the results obtained with the PCI (IOLMaster, Ziess, Germany).

Methods: The retrospective, cross-sectional study was done between September 2016 and October 2016. In 65 patients with planned cataract surgery, the following were measured using both methods; visual acuity, auto-refraction, manifest-refraction, keratometry (D), AL (mm) and ACD (mm). Each measurement was measured three times; the comparison between the two groups and between 3 measurements in one individual was done.

Results: The mean difference between the two groups was 0.06 ± 0.009 mm in AL ($p=0.539$), 0.14 ± 0.019 D in Keratometry ($p=0.134$) and 0.20 ± 0.021 mm in ACD ($p=0.121$). There was no significant difference between the two groups. The intraclass correlation coefficient of SS-OCT was 1.000 in AL, 0.999 in keratometry and 0.996 in ACD, respectively.

Conclusions: The measurements of SS-OCT ocular biometer (Argos, Movu, Inc.) were not significantly different from those of the PCI device (IOLMaster). Measurements with the SS-OCT biometer were repeatable.

Biography

Choun-ki Joo is the Professor of Department of Ophthalmology, College of Medicine at Catholic University of Korea. He serves as a Member of the Scientific Advisory Board at EyeGene, Inc., and a Member of Medical Scientific Advisory Board at LinCor Biosciences, Pte. Ltd.

ckjoo@catholic.ac.kr

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