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**Record 1 of 1****Title:** Accuracy of Contact Lens Method by Spherical and Aspheric Rigid Gas Permeable Lenses on Corneal Power Determination in Normal Eyes**Author(s):** Mustafa, MMSM (Mustafa, Md Muziman Syah Md); Mutalib, HA (Mutalib, Haliza Abdul); Ab Halim, N (Ab Halim, Noorhazayti); Hilmi, MR (Hilmi, Mohd Radzi)**Source:** SAINS MALAYSIANA **Volume:** 49 **Issue:** 6 **Pages:** 1431-1437 **DOI:** 10.17576/jsm-2020-4906-21 **Published:** JUN 2020**Times Cited in Web of Science Core Collection:** 0**Total Times Cited:** 0**Usage Count (Last 180 days):** 0**Usage Count (Since 2013):** 0**Cited Reference Count:** 26

Abstract: Contact lens method (CLM) is an alternative option to measure corneal power by evaluating the difference of patient's over-refraction with rigid gas permeable (RGP) lens to manifest refraction. The purpose of this study was to evaluate the accuracy of CLM using spherical (CLMspherical) and aspheric (CLMaspheric) spher d RGP lenses in measuring corneal refractive power of normal corneas. This prospective study recruited 45 normal eyes of 45 healthy subjects. The corneal power measurements were determined by CLMspherical using Boston ES RGP and CLMspherical using Boston Envision RGP based on alignment fitting strategy. Manifest refraction and over-refraction were determined using a standard procedure of objective and subjective refraction methods. IOLAMaster was set as the reference method for comparison. The mean arithmetic difference, mean absolute difference and 95% limits of agreement (LOA) of corneal powers obtained from CLMspherical and +/- to IOLAMaster value were evaluated for the accuracy assessment. The mean arithmetic difference and mean absolute difference of corneal power s obtained from CLAI spherzcal and CLMspherical to IOLAMaster values were 0.10 +/- 0.21 D and 0.20 +/- 0.11 D, and 0.04 +/- 0.09 D and 0.08 +/- 0.05 D, respectively. The 95% LOA between CLA/I spheric and IOLMaster ranged from -0.30 to 0.51 D, whereas between CLA/I sphenc and IOLAMaster was ranging from -0.14 to 0.21 D. CLM in estimating corneal power is more accurate with application of aspheric RGP compared to spherical RGP. Hence, aspheric RGP is suggested for CLM when determining corneal power in normal eyes.

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