

Cup Disc Ratio: Agreement between Fundus Biomicroscopic estimation and Heidelberg Retinal Tomograph.

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Abstract

Aims: To assess the Cup disc ratio (CDR) using Heidelberg Retinal Tomograph (HRT) and to correlate the findings with fundus bio-microscopic assessment by a glaucoma specialist, for establishing agreement between the two methods.

Study Design: A hospital based cross-sectional comparative analytical study.

Methods: 30 eyes of normal subjects and 30 eyes of glaucoma patients were selected from the OPD and Glaucoma Clinic of Al-Shifa Trust Eye Hospital from 10th April 2004 to 10th October 2004. The data for Mean, horizontal and vertical CDR by Fundus Bio-microscopy and HRT were analyzed by the SPSS 10 for finding an agreement or otherwise between the two.

Results: In normal subjects, there was strong correlation between the two methods when assessing the mean horizontal and vertical CDR ($r = 0.718$ and 0.769 respectively). The horizontal CDR measured by two methods was correlating well ($r = 0.565$) but with significant difference in the values ($p=0.002$). In glaucoma patients, there was good correlation between the two methods in mean, horizontal and vertical CDR values ($r = 0.461$, 0.490 and 0.357 respectively).

Conclusion: There is agreement between the clinical assessment of CDR by a glaucoma specialist and HRT, but clinicians tend to underestimate the horizontal CDR especially in normal individuals. HRT provides real-time reproducible images of the human fundus, which can be used to assess patients with glaucoma. *Al-Shifa Journal of Ophthalmology* 2014; 10(2): 86-95. © Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan
