

ABSTRACT

Validity of frequency doubling technology to diagnose glaucoma

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Objective: To determine the validity of frequency doubling technology (FDT) in identifying glaucoma subjects using Humphrey perimetry as gold standard.

Study Design: Cross-sectional validation study.

Subjects and Methods: The study was conducted at the Glaucoma clinic of Al-Shifa Trust Eye Hospital Rawalpindi from 16th Nov 2009 to 15th May 2010 on 84 eyes suspected to have glaucoma. After an informed consent, detailed history and complete ocular examination, patients were briefed about the two diagnostic tests. Each patient performed both perimetry tests, i.e. Standard Automated Perimetry (Humphrey 30-2) and FDT. At the end of each test, perimetry systems calculated mean deviation for the eye examined. Sensitivity and specificity of the procedures was calculated using formulae.

Results: Mean test duration for FDT perimetry was 4.44 min and for Humphrey perimetry duration was 9.10 min. The sensitivity and specificity calculated for FDT perimetry were 85.4% and 90.7% respectively. Area under the receiver operating curve for FDT perimetry was 0.880 (95%CI=0.799-0.961).

Conclusion: FDT perimetry has ability to discriminate between glaucomatous and healthy eyes, in less duration and can be effectively used as a screening tool to diagnose glaucoma. *Al-Shifa Journal of Ophthalmology 2011; 7(1): 39-47 © Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan.*
