# Evaluation of Contrast Sensitivity And Chromatic Vision In Patients With Primary Open Angle Glaucoma

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**Purpose**: This study aimed to assess contrast sensitivity and acquired color vision deficiency in patients with primary open-angle glaucoma and to evaluate their correlations with visual field parameters.

**Design:** This was an observational cross sectional study

**Patients and Methods**: The current study included 100 patients with primary open-angle glaucoma and 40 healthy control subjects. The 100 glaucoma patients were divided into 3 groups (mild, moderate and sever). Ophthalmic examination included best corrected visual acuity (BCVA), gonioscopy, slit lamp biomicroscopy, visual field assessment by perimetry and intraocular pressure was measured using Goldmann applanation tonometry. Contrast Sensitivity evaluated by the Pelli-Robson chart and the Mesotest II b. Color vision was evaluated by the Farnsworth- panel D15.

**Results**: The mean age of the studied cases was 52.61±14.86 years with male to female ratio 50.2/49.8. Cup-To-Disc (C/D) ratio was statistically significant increase in severe cases followed by moderate and lastly mild glaucoma subgroups. There was highly statistically significant increase in the mean C/D ratio among cases with glaucomatous eyes compared to normal .There was a significant correlation between worsening visual field indeces and decreased contrast sensitivity. Color vision was demonstrated to be significantly correlated according to severity, duration of affection, age and uncontrolled IOP.

**Conclusion**: Mesotest II b is a better alternative to conventional reliable and reproducible Pelli Robson chart test for assessment of contrast sensitivity in patients with glaucoma.