

**Project No** : 3980/2009

**TO ASSESS FREQUENCY DOUBLING TECHNOLOGY IN DETECTING FUNCTIONAL GLAUCOMATOUS DAMAGE IN GLAUCOMA SUSPECTS.**

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**OBJECTIVES**

To see whether clinical findings correlate with field changes

**METHODOLOGY**

Comprehensive ocular examination was done for all patients which included Best corrected visual acuity, slit lamp examination , applanation tonometry, gonioscopy, slit lamp biomicroscopy with + 90 diopter lens, pachymetry, SAP, FDT perimetry .Visual fields considered abnormal according to H- P-A criterion.

**RESULTS**

Mean test duration was not significantly higher with SAP SITA as compared to FDT matrix (  $p < 0.133$ ) in the glaucoma suspect group. Overall mean threshold was significantly lower for FDP matrix then for SAP SITA (  $p < 0.001$ ). Mean deviation was significantly lower in FDT matrix in both glaucoma suspects and control groups.( $p = 0.002$ ) and ( $p=0.001$ ) resp. There was significant difference in PSD between SAP SITA and FDP matrix in glaucoma suspects group ( $P= 0.139$ ) as well as in controls. Percentage of normal test locations were significantly higher in FDT matrix as compared to SAP SITA in both glaucomatous suspects and control groups (  $p= 0.015$  and  $p=0.002$ resp.)In both groups there was no significant difference between SAP SITA and FDT matrix in the number of points depressed at the level of  $p < 0.5\%$ .In both groups number of locations depressed at level of  $p < 1\%$  in PDP was significantly higher in SAP SITA as compared to FDT matrix but A highly significant correlation was seen between the devices in glaucoma suspects while no significant correlation seen between the devices in control group. Mean defect size detected by SAP SITA was significantly larger than FDT matrix in glaucoma suspects ( $p= 0. 016$ ), with strong correlation between devices.Mean defect depth of SAP SITA was significantly shallower than FDT matrix in both groups.

**CONCLUSION**

Present study supports the utility of FDT matrix to compare visual fields in patients of primary open angle glaucoma suspects over standard automated perimetry but the device does not detect larger defects than SAP SITA so FDT can contribute as a compliment to SAP for detecting visual field loss and not as a replacement.