Study of the Epidemiology of Open Angle Glaucoma and Comparison of Central Corneal Thickness in Open Angle Glaucoma with Optical Coherence Tomography (OCT) and Ultrasonic Biomicroscopy (UBM)

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ABSTRACT:

Aim:

1. To study epidemiology of Primary Open Angle Glaucoma (OAG) in patients who attended general Out Door Patient Department at a tertiary referral care centre.

2. To measure and to compare Central Corneal Thickness (CCT) by Anterior Segment Optical Coherence Tomography (AS-OCT) and Ultrasound BioMicroscopy (UBM) in Primary Open Angle Glaucoma (POAG) patients.

Material And Methods:

In this retrospective study, 90 eyes of 45 patients who were diagnosed with POAG were taken, during Sept 2011 to Sept 2013.After detailed history taking, slit lamp examination of anterior segment, Intra Ocular Pressure (IOP) measurement, Gonioscopy & fundus and visual field examination was done.UBM was done to analyse anterior segment parameters including anterior chamber angles and CCT.AS-OCT used to analyse central corneal thickness.

Result:

Majority of patients were in the age group of 41-60yrs(28 patients,62%), Male:Female - 29:16, 11 patients were presented at advanced stage of disease; out of them 7(63.63%) were from low socio-economical class, 62 eyes had CCT<540microns, 28 eyes had CCT>540microns in OCT ,Mean CCT:530u, 24 eyes had CCT<540microns, 66 eyes had CCT>550micron in UBM, Mean CCT:553u, UBM overestimates CCT in the range of 20-25 microns.

Conclusion:

POAG is a disease of old age with male dominance, in our study.25 % patients were presented with advanced glaucoma & most of them were from poor socio economical class. Majority had moderate glaucomatous changes. Both UBM and AS-OCT are useful for assessment of the anterior chamber and angle of the eye, therefore it is for the individual physicians to choose the platform that suits their preferences and needs.

Key Words: Primary Open Angle Glaucoma, CCT (central corneal thickness), UBM(ultrasound BioMicroscopy), OCT(Optical Coherence Tomography)

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