APPENDIX
APPENDIX - I

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PROFORMA FOR EXAMINATION

1. Name of patient
2. Age/Sex
3. OPD/MRD No.
4. Occupation
5. Address
6. Socio-economic status -
   (a) Presenting symptoms
   (b) Past history
   (c) Brief history of present illness
   (d) Family history
   (e) Personal history
   (f) Examination -
      - General examination
      - Local ocular examination
      - Orbit
      - Eye lids
      - Conjunctive
      - Cornea
      - Anterior Chamber:
      : Depth - Normal, Shallow, deep
      : Contents - Flare, if any
      : Angle
      - Iris:
      : Colour
      : Shape
      : Surface
      : Patterns
      : Synaechia etc.
      : Others

Case No.
- Pupil:
  - Size
  - Shape
  - Colour
  - Reaction to light -
    - Direct
    - Consensual

- Lens:
  - Transparency
  - Position
  - Colour
  - Any other finding

- Tension - digitally

Tonometry:

Perimetry:

Gonioscopy:

Slit Lamp Examination:
- Cornea
- Anterior Chamber
- Angle
- Lens
- Vitreous

Direct Ophthalmoscopy
- Media
- Optic disc -
  - Colour & shape
  - Margin
  - Cupping
  - Crescent
  - C/D Ratio
- Blood vessels -
  - A.V. Ratio
  - Pattern of vessels over disc
  - Arteries
  - Veins
  - A.V. Crossing
  - Haemorrhages
  - Exudates
- General fundus picture
- Fluorescein angiographic report
- Optic disc
- Hypofluorescence
- Relative
- Absolute
- Early arterial phase
- Arterio-venous phase
- Late venous phase
- any other findings
- Hyposulphuric reflex
SUMMARY

The present study was undertaken to found out the atrophic changes of optic disc in various types of glaucomas with fluorescein angiographic changes and to correlate the visual field defects fluorescein angiographically. Twenty five patients (fourteen male and eleven female) of various types of glaucomas with established optic disc pallor and cupping and various types of visual field changes were taken. At least one eye in each patient was studied by detailed ophthalmoscopy, perimetry and fluorescein angiographically.

Patients were divided into three groups:

Group - I - Eyes with chronic simple glaucoma
Group - II - Eyes with chronic congestive glaucoma
Group - III - Eyes with low tension glaucoma.

Group - I - Consists of 19 patients all were having an open angle of the anterior chamber of the eye.

Group - II - Includes two cases. These were having narrow angle and were operated for drainage operation.

All the patients of these two groups had an elevated intracocular pressure (Higher than 20 mm of Hg) at some stage previously with other supporting evidence of glaucoma like positive provocative tests, abnormal diurnal variation etc.
The patients of group I ranged from 22 to 69 years (76%), and the patients of group II (6%) ranged from 70 to 79 years. Maximum number of patients were between 50-60 years.

Group - III - Includes 4 cases. All were having wide open angle. The intraocular pressure was never higher than 20 mm. Hg. The diurnal variation was extremely positive in 21 cases (84%) and in 4 cases (16%), it was not much significant.

All three group cases were having various grades of cupping and pallor of the optic disc.

Pallor of the disc was present in 86% of cases and cupping was present in all the discs. The cupping was of different grades from mild to marked cupping. 40% of the discs were having large deep cupping with excavation posteriorly and the vertical cup/disc ratio was more than the horizontal.

Visual field changes from paracentral scotomas to advanced type of defects were present. No definite sequence was followed and all types of variations were present, producing an indefinite variety of different appearances. The defects in the fields were related to height of intraocular pressure. In our study all the patients were having various types of visual field changes.
The defects were typically associated with both cupping of the disc and pallor of the nerve head. When both were present the defects in the visual fields were always present.

The disc showed generalized hypofluorescence by fluorescein angiography. Hypofluorescence was of two types – (1) Relative type and, (2) Absolute type.

Three optic discs were having only relative defects (12%), seventeen discs were having absolute defects only (68%) and remaining 5 discs were having both types of defects (20%).

The relative defects were commonly present in the nasal rim of the disc while absolute defects were commonly present at the superior and inferior positions, beginning in the wall of the cup and extending to the disc rim and edge.

This study showed smaller number of the relative defects (16.6%) and the larger number of the absolute defects (83.4%). As the severity of the field defects increased, the proportionate number of the absolute defects were appeared to increase until eyes with advanced loss of visual field were reached.
The factors such as age, the incidence of systemic diseases including the diabetes mellitus, cardiovascular disease, vascular hypertension etc. were not having any significance with either distribution of discs with relative or absolute defects.

The levels of intraocular pressure before and after the fluorescein angiography had no significant change.

In general, it was therefore, observed that the eyes with glaucoma patients had hypofluorescence of the optic disc by fluorescein angiography. This is due to degeneration of the nerve fibres at the optic disc which is developed by ischemia of the disc vessels.

Improved methods of fluorescein angiography can aid in determining the vascular pathogenesis of the visual field defects in glaucoma.