MATERIAL AND METHODS

The present study is carried out in the Department of Ophthalmology, MLB Medical college and Hospital, Jhansi. The Diabetic patients attending the Diabetic clinic of department of medicine and also those attending the outpatient department of ophthalmology coming for their routine eye checkup are all selected in our study. All the patients were thoroughly examined with special emphasis on the patients intraocular tension and fundus, and all relevant information regarding the cases recorded on predesigned working proforma.

Our case material are then grouped as:

(a) CONTROL - 80 Normal non diabetic persons were taken as control for present study.
(b) STUDY GROUP
   (i) Cases having juvenile diabetes mellitus
   (ii) Cases having maturity onset diabetes mellitus (MODM).

SELECTION OF CASES

(A) CONTROL -

Total 80 cases were taken as control for the present study. The external examination of eye and detailed history was taken. Disease affecting the intraocular pressure as Iridocyclitis, Glaucoma, corneal ulcers etc. were not considered for the study

(B) STUDY GROUP

(1). Selection of Juvenile Diabetics - Those diabetics who are insulin dependent, usually have a positive family history, symptoms start abruptly, very rarely gradually, and patients are usually below 40 years of age.

(2). Maturity onset Diabetes mellitus - Persons not dependent on insulin but showing hyperglycemia. Symptoms start gradually, manifest after 40 years of age usually are MODM patients.

HISTORY, CLINICAL EXAMINATION AND INVESTIGATIONS-

Detailed clinical history of the patient, his family history was taken and the cases were examined thoroughly for any ocular infections or other associated disease. A Complete ophthalmic examination which include visual acuity, local examination, careful tonometry with
Schiotz tonometer has been done. As and where possible the provocative tests, gonioscopy, perimetry has been done. The laboratory investigations viz. Blood sugar levels fasting, PP/ random were done. Direct ophthalmoscopic examination was done for fundus findings. On the basis of ophthalmoscopy patients were divided as diabetics with retinopathy and diabetics without retinopathy.

**PROCEDURE FOLLOWED DURING THE STUDY**

Tension of both the eyes were recorded by the standard certified Schiotz tonometer. Cornea was anaesthetised with 4% xylocain and then tension was taken. Same tonometer was used throughout the study. Any person having very high tension were excluded from the study.

Pupils of the patient's eyes were then dilated using 10% phenylephrine drops, 1-2 drops instilled at 5-10 mts interval 3-4 times. Fundus was seen by direct ophthalmoscope and the retinal status was graded as diabetics without retinopathy and diabetics with retinopathy. Diabetics with retinopathy again divided into diabetics with background diabetic retinopathy and diabetics with proliferative retinopathy.

In the fundus examination special attention is given to the presence of any glaucomatous changes present in the optic disc.

The cases who were found to be having raised intraocular pressure or having previously diagnosed glaucoma or the patients having positive provocative tests were further investigated and divided into following groups

1. **PRIMARY GLAUCOMA WITH EARLY DIABETES MELLITUS** - Patients having glaucoma with diabetes less than 10 year of duration

2. **PRIMARY CLAUCOMA WITH LATE DIABETES MELLITUS** - Patients having glaucoma with diabetes more than 10 year of duration.

3. **SECONDARY GLAUCOMA** - Patients having glaucoma with ruberosis Iridis and proliferative retinopathy