SUMMARY AND CONCLUSION

In the present study a total of 160 cases were selected, of which 80 were normal nondiabetic persons acting as control, and the remaining 80 cases were diabetic persons serving as study group. In the control group 48 (60%) were males and 32 (40%) were females whereas in the study group 46 (57.5%) were males and 34 (42.5%) were females.

In all cases a detailed history with special reference to duration of diabetes and ocular history was obtained and a complete ophthalmic examination which include visual acuity, local examination, careful to nometry had been done. As and where possible the provocative tests, gonioscopy, perimetry and blood sugar investigation had also been done. Direct ophthalmoscopical examination was done for fundus findings (glaucomatous and retinopathic). On the basis of ophthalmoscopical patients were divided as diabetics without retinopathy and diabetics with retinopathy.

In the diabetic group most of the patients 41 (51.2%) were below the 50 years of age in comparison to control 37 (45.8%) which confirms that onset of diabetes occurs somewhat earlier than 50 years of age.

In the study (diabetic) group, 2 cases were of juvenile diabetes and both were females whereas in maturity onset diabetes males were predominating. The male to female ratio also increases with the age i.e. 1.2:1 below the 50 years and 1.6:1 above the 50 years of age.

Among 80 patients (160 eyes) of diabetic group only 26 (16.25%) eyes had diabetic retinopathy. Background diabetic retinopathy was present in the all 26 (16.25%) eyes while background plus proliferative both were present in 20 (12.50%) of eyes.

Among 13 cases of diabetic retinopathy most of the cases 8 (61.5%) cases of retinopathy occurred after 10 years duration of diabetes (late diabetics). So that it is observed that the diabetic retinopathy develops in diabetic patients on an average of 10 years duration.

In the diabetic group 14 (8.75%) eyes had intraocular pressure above the normal range of tension (22 mmHg) while only 8 (5%) eyes in control group had tension above this range.
shows that greater no. of diabetic patients (type I and type II) had higher intraocular pressure than the normal persons.

The mean intraocular pressure of diabetic eyes was greater (19.2 mmHg) when compared to mean intraocular pressure in eyes of nondiabetic population.

The mean intraocular pressure of background diabetic retinopathy was found higher (19.75 mmHg) than mean intraocular pressure of normal population (18.5 mmHg) as well as eyes of diabetic patients without retinopathy, but the eyes with proliferative retinopathy had mean intraocular pressure (17.3 mmHg) less than normal population as well as diabetic population. In other words we can say that mean intraocular pressure rises in diabetic population than normal population and it rises upto background retinopathy but when proliferative changes appears the mean intraocular pressure falls. We can also say that high intraocular tension protects the development of proliferative changes.

Glaucoma is more common in diabetes. 7 patients (14 eyes) 8.5% in the diabetic group had glaucoma as compared to 4 patients (8 eyes) 5% in control group. The value is statistically (with Chi square test) significant.

Primary open angle glaucoma is more common in diabetic population as compared to other glaucomas. Among 7 (8.5%) of glaucoma patients 4 (5%) cases had primary open angle glaucoma which is more as compared to 2 (2.5%) cases of primary closed angle glaucoma and 1 (1.25%) of secondary glaucoma. Statistically (with Chi square test) the value is significant.

In the present study we could not make any certain comment on the sex ratio of different types of glaucomas because male: female ratio was 1:1 in primary open angle glaucoma and primary closed glaucoma and only 1 patient had neovascular glaucoma.

From the present study we concluded that glaucoma in diabetic population occurs somewhat earlier than in normal population. In the present study primary open angle glaucoma was found to occur in the 4th decade while primary closed angle glaucoma was found to occur in the 5th and 6th decade.
The mean intraocular pressure in cases of diabetes having glaucoma with field defects was 24.6 mmHg indicating that field defects in diabetics cases with glaucoma occurred at a lower intraocular pressure.

We therefore conclude that -

(a) The mean intraocular pressure was higher in cases of diabetics when they are compared to normal ones.

(b) Primary open angle glaucoma is more common in diabetics as compared to primary closed angle and secondary (neovascular) glaucoma.

(c) As the severity of retinopathy increases the intraocular pressure also increases but in the proliferative diabetic retinopathy we find a lower intraocular pressure. This confirms the common saying that “Glaucoma in a diabetic case protects him to develop proliferative retinopathy.”