SUMMARY

Diabetes mellitus is the most common endocrine disease and the complications are known to occur in almost every part of visual organ some of these changes are of no importance and are not characteristics, other, however, are pathognomonic for diabetes. These changes are related to duration of diabetes, age of onset and control of diabetes.

The present study had been carried out in the department of Ophthalmology, M.L.B. Medical College, Jhansi, to search out the extent to which eyes become victim of diabetes mellitus. The cases were selected randomly from Diabetic clinic of department of Medicine and from Ophthalmology department. Details of the findings of each patients was recorded alongwith general information of patient alongwith duration of diabetes, duration of treatment, type of treatment whether insulin or non-insulin dependent, all patients went through complete ophthalmic examination and complete relevant investigation viz. Tonometry (Shiotz) slit lamp examination and visual field charting when and where required. Fundoscopy by direct ophthalmoscopic by dilating pupils by 10% phenyl ephrine drops.
In the present study 106 diabetics were examined in which 64 (60.37%) cases were males and 42 (39.62%) were females.

Maximum number of patients were from the age group of 41 - 60 years (52.83%) followed by 21 - 40 years (22.64%) and above 60 years (20.75%).

Type - I IDDM comprised of (26.42%) cases and type - II NIDDM (73.58%).

Incidence of ocular involvement among 106 diabetics was 89.62% and was related to duration of diabetes, rather than with the age of patients. With duration of less than 5 years 20% involvement and 6-11 years (65.22%) and 11-15 years 75% and 16-20 years 90% and above 21 years had nearly 100% involvement in one way or other.

Involvement of ocular adnexia was in 26 cases. Blepharitis was observed in 8 cases, Recurrent sty in 11 cases, Trichiasis in 4 cases, and one case each in ptosis, Acute and Chronic dacryocystitis.

Non specific findings related to conjunctiva were conjunctivitis in 3 cases, xerosis in 2 cases and pterygium in 1 case.

Cornea got involved in 30 cases i.e. decreased corneal sensitivity in 15 cases, which is significant
finding among other changes seen in cornea. Superficial punctate keratitis and corneal opacity in 5 cases, corneal striae in 4 cases and one case of corneal ulcer.

Iris was involved in 19 cases, acute iridocyclitis in 4 cases, pigmentary changes in 3 cases, iris atrophy in 2 cases, rubeosis iridis in one case. Pupillary reaction to light was found sluggish or fixed in 9 cases.

Lenticular changes were more common in females out of total 74 cases there were 23 females and 14 males. Another interesting finding was that the lenticular changes was seen in all the age groups, and it appeared earlier in diabetics and was important factor for visual impairment.

Intraocular pressure was recorded in 86 cases in which fundus was visible. It was then compared in different grades of retinopathy. The mean intraocular tension in eyes without retinopathy 17.93 ± 1.0 mmHg. Mean intraocular tension in eyes with retinopathy was 18.95 ± 2.38 mmHg, this when compared to the eyes without retinopathy was towards higher side. Mean intraocular tension in grade-I retinopathy was 19.12 ± 1.62; in grade II 19.35 ± 1.91; and finally in grade III, the mean intraocular tension 15.49 ± 1.50 showed lower value than other grades of retinopathy including eyes without retinopathy.
Apart from all these changes we also studied the relation between the development of retinopathy and duration of disease leaving aside the age of the patient, and the severity of disease. The retinopathy seems to develop of any grade on an average of 16.7 years of duration.

With duration of diabetes less than 5 years, there was no retinopathy, with duration of diabetes upto 10 years 16.66% cases had no retinopathy 75% had grade-I retinopathy; and 8.33% cases had grade II retinopathy and none had grade III retinopathy.

With duration of diabetes, upto 15 years 16.6% cases had grade-I retinopathy, 83.33% grade II and none had grade III retinopathy.

With duration of diabetes upto 20 years none had grade – I retinopathy, 70% cases had grade-II and 30% cases had grade III retinopathy.

With duration of diabetes upto 25 years none had grade-I retinopathy, 60% cases had grade II and 40% cases had grade III retinopathy.

With duration of diabetes more than 25 years all cases had only grade III retinopathy.

These findings clearly suggests that as the duration of diabetes increases, the severity of diabetic retinopathy also increases.