SUMMARY AND CONCLUSIONS

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This study aimed to identify the microbial causes of conjunctivitis, dacryocystitis, corneal ulceration, post-operative infections, discharging sockets and other variable eye infections in non diabetic and in diabetic patients, in order to detemine the relation between the pathogen and diabetes. The study was made on 400 cases selected from outpatient ophthalmic clinics in different rural and urban areas with special references to age and sex of patients as well as their socioeconomic state and seasonal variation of infection.

- The conjunctival cases were 175 patients, the trachomatus cases 56 patients.

- The dacryocystitis cases 25 patients, post-operative cases 45 patients, corneal ulceration 20 patients, evisceration and discharging sockets of eye 5 patients and diabetic cases 70 patients.

Trials were made to isolate the different bacterial organisms Trachoma and fungus from previously diagnosed ocular infections of patients. The methods started by taking samples from the different ocular infections followed by processing of these different samples for each type of isolate and identification. The different media and strains used were mostly according to Cruickshank et al. (1982), blood and plasma, antisera against types of Haemophilus

influenzae organism and eggs for propagation of trachoma were according to Frobisher (1978) and Chlamydia trachomatus directa (1985 Syva Co.) for monoclonal ABs by immunofluorescent technique and microscopy. The susceptibility of most common isolated organisms were tested by antibiotic discs method.

The following results came out of this work:

1. Conjunctivitis -43.75%- represented the highest occurence in all diagnosed conditions. Trachoma and post-operative came second by 13.75% and 22.25% respectively. Dacryocystitis 6.25%, corneal ulceration 5%, discharging sockets 1.25% and blepharitis 1.25% were the least.

2. With the exception of conjunctiva, cases were more manifested in over forty years than younger patients. Conjunctival disorder was more spread in the younger patients. Conjunctival disorder was more spread in younger boys and girls than in over 29 years age, and more spread in males than females of all ages. Sex trend is apparent in the dacryocystitis, corneal ulceration and discharging sockets. Diabetes was more manifested in elder patients over 40 years than younger males or females. More diabetic females than males were in younger ages while more diabetic males were over 40 years patients.

3. Bacterial isolates reported from the eye samples

were highest in discharging sockets followed by post-operative, dacryocystitis, conjunctivitis and corneal ulceration. The least isolates were in Trachoma and diabetic patients. Staph. organisms predominated. No bacterial growth was obtained in 1/4 of total cases.

4. The most common isolates were Staphylococcus aureus, Staphylococcus epidermidis, Haemophilus species, Pneumococcus, and other organisms. The most common isolated fungi were Candida albicans and Aspergillus followed by Penicillium.

5. In conjunctival cases infection with two organisms were 36% followed by cases with one organism only as 26.2%. The occurence of more than two organisms was extremely low 8%, while no bacterial growth cultures represented about 1/3 of the isolated cases.

Pneumococci incidence in 14 cases was very rare but still present in two cases. Cases affected by Haemophilus were 31.75% and by Staph. aur. 28.45%. The Staphylococcus aureus in groups other than Haemophilus was more prominent than other organisms. H. influenzae followed the percentage of isolated organisms 21.95%. Conjunctival male cases were more affected than females in all age groups except between 3-6 years when females were more affected. The Staphylococcus organism was more isolated followed by Haemophilus and diphtheroid, in haemagglutination test. In that test H. influenzae was more frequent than H. aegyptius.

6. Serotyping of 27 strains of H. influenzae

resulted in the identification of type (a) 40.75%, (c) 29.6%, (d) 14.81% and 14.81% were considered non typable and were usually regarded as relatively less virulent than typable isolates. No serological reactions were identified for strains b, e or f.

7. The fungus infections were more common in diabetic than non diabetic cases and in males than females. The most common fungal organism was Candida albicans followed by Aspergillus and Pencicillium. Aspergillus types were A. niger and A. flavus, the infection of A. niger is double that of A. flavus.

8. Trachoma boys were more affected than girls specially over 10 years. School age was the main age group of Trachoma in both sexes. Giemsa stain showed negative trachoma results. Immuno-fluorescent test gave trachom positive results of 38% of the clinically suspected positive cases.

9. Discharging sockets, Staphylococci specially epidermidis was more common. A. niger was isolated from a cases diagnoses as proptosis of the eye and followed by enucleation of the eye.

10. Bacterial and fungal affections increased with increasing age and the duration of illness. The fungal affection was more common than bacterial specially in old persons with prolonged history of diabetes. Candida alb. was more common fungi followed by Aspergillus than penicillium.

11. The most common intraocular operation in diabetic cases was cataract extraction. Number of operative cases increased with the increase in age of diabetic patients. Cataract extraction has more common operation in diabetic cases specially in males.

REFERENCES