have given a more or less large percentage of infections (Morax, Trousseau, Franke, Bach).

Franke found the bacillus xerosis only once. Bach never found it, while Axenfeld found it constantly. Gasparrim claimed to have found the pneumococcus in eighty per cent. of the cases he had examined, while scores of others have never met the pneumococcus in the normal conjunctival sac.

All the results have been similar, however, in that large numbers of organisms have been isolated. The results show that in the normal conjunctival sac there are both harmful and harmless bacteria, that the different forms of staphylococcus, and streptococcus, are frequently present, that we must always consider the possibility of the pneumococcus, the Kock-weeks bacillus or the diplobacillus of Morax-Axenfeld being present.

These organisms may be unable to injure the normal membranes, but allow them access to an abraded corner or line of incision, and they become the source of troublesome infection.

Axenfeld comes to the following conclusions:

I. The normal conjunctival sac is very often infected with pusproducing organisms, and the bacillus xerosis is constantly present.

That virulent micro-organisms are seldon found, but there is the possibility of their being present, especially the pneumococcus.

Eyre concludes:

The conjunctival sac frequently contains micro-organisms extremely varied in character, which may, or may not, be pathogenic.

II. The conjunctival sac of any individual may be sterile at the particular moment an observation is made.

III. The sterility of the conjunctival sac is due to the mechanical flushing of its mucous surface by the lachrymal secretion, aided perhaps by the bacteriacidal action of the fluid.

My experience has been that in the great majority of normal conjunctivæ, the ordinary pyogenic bacteria and the bacillus xerosis are present.

I take much pleasure in here recording my thanks to the Governors of the Royal Victoria Hospital, whose generosity enabled me to do this piece of work.

## BIBLIOGRAPHY.

Gallenga.—Ann. d'Ottalmologia, 1886. Fick.—Ueber. Mikrorganismen in Conjunctivalsack. Wiesbaden. 1887. Micheal.—Ueber Mikrorganismen in Conjunctivalsack. Monatsbl. f. Augenheilk. 1887.

Leber,—Trans-Ophthalmological Congress. Heidelberg, 1888.
Gombert.—Recherches sur les Microbes de la Conjonctive à l'état normal.
Bach.—Archives. f. Ophthal., Bd. XL, 3.