

# **ABSTRACT OF DISSERTATION**

**TITLE:** Observational study of trend of intraocular pressure variation in suppurative corneal ulcers in a South Indian tertiary care centre

**DEPARTMENT:** Ophthalmology

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**DEGREE AND SUBJECT:** MS Ophthalmology

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## **OBJECTIVES**

Primary Objective:

To compare the Intraocular Pressure prospectively in the affected eye of patients with infective corneal ulcers with the opposite unaffected eye of the same patient.

Secondary Objectives:

- 1) To determine if rise in IOP leads to prolongation of Time to Heal.
- 2) To determine the IOP trend with respect to microbiological profile of patients with corneal ulcers.
- 3) To determine if initial presenting size of the ulcer has any influence on IOP.

## **METHODS**

This was a hospital based, observational study. Patients who presented to the department of ophthalmology with active corneal ulcers ,who met the eligibility criteria ,were enrolled after obtaining informed consent. All patients underwent complete ophthalmologic examination according to protocol and underwent microbiological investigation . Intraocular pressure was checked in every third day from the day of admission, from the normal and the ulcer eye and the trend of the difference in IOP, between the two eyes was observed. The trend of intraocular pressure variation in ulcer eye in relation to microbiological profile and the size of the ulcer was studied .The relationship of the above mentioned variables to the time of healing was observed.

## **RESULTS**

The average “Time to Healing” of all the ulcers included in this study was found to be 24 days. The analysis of the results of the IOP monitoring did not show a clear trend of IOP in the ulcer eye of the population studied, except for a suggestion that bacterial ulcers may tend to have a higher IOP in the ulcer eye than the unaffected eye, and that perhaps *Streptococcus pneumoniae* ulcers have an IOP spike that should be monitored for and treated appropriately. This study does not show a significant difference in the “Time to Healing” based on raised intraocular pressure in the ulcer eye, size of the ulcer (P value=0.23) and microbiological isolate (P value=0.27) profile.

**Key words:** Intraocular pressure variation ,Active corneal ulcers ,Tonopen ,Size of ulcer, Microbiological profile, Time to heal