

EFFECTIVENESS AND SAFETY OF INSULIN 1UI/ml EYE DROPS

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BACKGROUND AND IMPORTANCE

Epithelial corneal defects are damaged areas of the corneal epithelium as a consequence of injury. The existence of insulin and insulin-like growth factor receptors in cornea keratocytes and epithelial cells could explain the increment on the corneal epithelial healing rates. Clinical experience with insulin eye drops is limited and more evidence in both diabetic and non-diabetic patients is still needed.

Recently, the insulin eye drops formulation 1 IU/mL has been prepared in Pharmacy Hospital for patients with keratitis, dry eye and a persistent epithelial corneal defect (PECD).

AIM AND OBJECTIVE

The aim is to describe effectiveness and tolerance of insulin 1 IU/mL eye drops treatment for different refractory corneal diseases.

MATERIALS AND METHODS

Retrospective observational study in a tertiary hospital. 21 patients were included, treated with insulin eye drops during the period between February 2022 – September 2022. The variables collected were: demographics, indication, duration of treatment, clinical response and adverse effects. All data were obtained from the electronic medical history.

RESULTS

21 patients were treated with insulin eye drops 1 UI/mL, six of them with diabetes mellitus and other fifteen were non-diabetic. Administration frequency was 4 times in a day (QID). They presented different corneal diseases that were refractory to conventional treatment.

The median age was 74 (43-89) years. A total of 52,4% were women. 38,1% were diagnosed with non-herpetic keratitis, 19% with herpetic keratitis, 23,8% with corneal erosion, and 19% with persistent epithelial corneal defect (PECD). The median duration of treatment was 6 months (2-9 months).

100% of patients responded to treatment and continued with insulin eye drops after epithelial healing. All patients presented epithelial healing in about 30-60 days, most of them referred improved of symptoms during first two weeks.

No significant adverse effects were reported. None hypersensitivity reaction were reported because of m-cresol presence in insulin eye drops.

CONCLUSION AND RELEVANCE

The insulin eye drops formulation 1 IU/mL administered QID can be a quick, effective, and safe option for different corneal diseases refractory to the usual treatments in both diabetic and non-diabetic patients.

