

## SCLERAL LENSES IN THE MANAGEMENT OF DIFFERENT DISEASES (CASE STUDIES)

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Scleral lenses are large-diameter rigid gas permeable lenses. They can range from 14 mm to over 20 mm in diameter. Scleral lenses functionally replace the irregular cornea with a perfectly smooth optical surface to correct vision problems caused by keratoconus and other corneal irregularities.

**Aim:** of the study is to demonstrate the benefit of the scleral lenses in the management of different diseases (case studies), based on the results provided by the subjective & objective findings and corneal topography where was possible.

**Method:** The authors present clinical cases of 7 patients, aged between 25-59 years old, who came to the Medical Center "Oculus Prim" with different complaints as: gradual decrease of the visual acuity (VA) or other eye problems.

In some cases at the corneal topography were detected different complex deformation of the cornea.

Within the center were chosen the suitable scleral lenses.

**Result:** Several types of corneal abnormality as keratoconus, pellucid corneal degeneration, severe astigmatism, condition after CrossLinking, corneal dystrophy were managed successfully with modern scleral lenses. The main indication was optical correction of an irregular corneal surface. Satisfactory clinical performance meant that all the patients could continue to wear their scleral lenses.

**Conclusion:** Scleral contact lens represents a promising alternative in contact lens treatment for corneal problems considered to be difficult to fit with more traditional rigid lenses.

## EVALUATION OF AQUEOUS FLARE AFTER DESCMET'S STRIPPING ENDOTHELIAL KERATOPLASTY AND PENETRATING KERATOPLASTY

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**Purpose:** Evaluation of aqueous flare in patients after Descemet's Stripping Endothelial Keratoplasty (DSEK) and Penetrating Keratoplasty (PK) performed of various indications.

**Material and methods:** In a prospective study 17 eyes in 16 patients were examined. First group consisted of 8 eyes after DSEK, second: 9 eyes after PK. The first procedure was performed of Fuch's dystrophy - 4 eyes, bullous keratopathy - 4 eyes. The indications in the second were as follows: keratoconus - 2 eyes, corneal cicatrix without neovascularization - 3 eyes, endangering corneal perforation - 4 eyes. Examined group mean age was respectively 67 and 69 years. The overall examining time was six months after the surgery. In the paper aqueous flare was evaluated in the anterior chamber in 1<sup>st</sup>, 3<sup>rd</sup> and 6<sup>th</sup> month after keratoplasty in FM-600 Laser Flare Kowa. Abovementioned device function is based on emission and detection of light produced by diode laser. Keratoplasty was performed in general (No 9) or in local peribulbar (No 8) anaesthesia.

**Results:** Mean aqueous flare in 1<sup>st</sup>, 3<sup>rd</sup>, and 6<sup>th</sup> month after keratoplasty is significantly lower after DSEK (14,46 +/- 4,70 ph/ms; 10,64 +/- 2,91 ph/ms; 5,98 +/- 2,53 ph/ms) in comparison with PK (18,50 +/- 5,82 ph/ms; 15,04 +/- 6,38 ph/ms; 10,68 +/- 3,83 ph/ms). In 6 months observation the mean flare value in DSEK was decreased twice in comparison with PK. Considering indication for