

## **Summary:**

### **Treatment of keratoconus using Accelerated Corneal Cross-Linking**

**Aim:** This study evaluates the efficacy of treatment of progressive keratoconus using Accelerated Corneal Cross-linking (ACXL) method.

**Methods:** The study included 35 eyes of 32 patients, who underwent ACXL at the Department of Ophthalmology of University Hospital in Hradec Králové. Uncorrected distance visual acuity (UCVA), best corrected distance visual acuity (BCVA), flat and steep keratometry (K1, K2), maximum keratometry (K<sub>max</sub>), corneal astigmatism and corneal pachymetry in the thinnest location were measured preoperatively and in 6 months, 1 year and 2 years after the surgery.

**Results:** There was not found the statistically significant difference between preoperative and postoperative values of UCVA, BCVA, K1 and K<sub>max</sub>. Steep keratometry (K2) and corneal astigmatism was statistically significant decreased. The pachymetry in the thinnest location was preoperatively  $469 \pm 33 \mu\text{m}$ . The value was statistically significant decreased in 6 month and 1 year after the surgery by comparison with preoperative value. 2 yaers postoperatively there was not the statistically significant difference by comparison with preoperative value.

**Conclusion:** Our results in patients with progressive keratoconus found ACXL is an effective and safe method to treat keratoconus. There was no evidence of progression in keratometry during 24month period.

Key words: keratoconus, Accelerated Corneal Cross-linking