



79th



International
Scientific
Conference of
the University
of Latvia

Visual performance of scleral lenses in patients with different stages of keratoconus

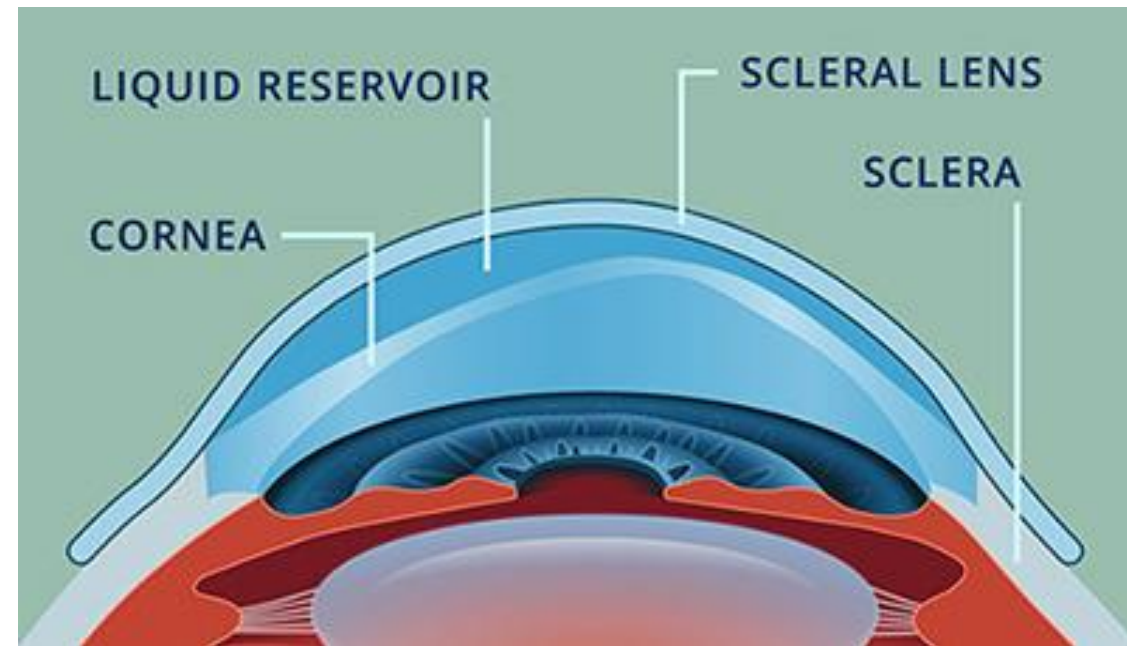
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Background. Keratoconus is a disorder of the eye, when the cornea becomes thinner and deforms causing blurry and double vision. Glasses in this case usually do not give a satisfactory visual acuity. Scleral lenses are used to improve visual acuity.

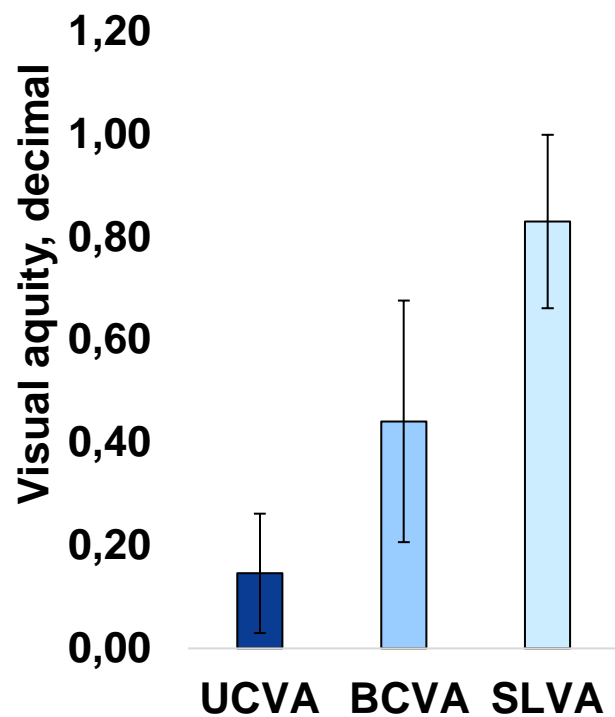
Aim. The aim of the current study was to evaluate the visual quality performance of scleral contact lenses in patients with keratoconus and analyse the factors that can affect visual performance.

Methods. For this retrospective study we investigated 17 eyes of 15 participants (1 female and 14 males, average age 30.3 ± 8.1 years) with keratoconus (stage II, III and IV), which were fitted with scleral contact lenses. Two participants had intrastromal corneal rings. Uncorrected (UCVA) and best corrected (BCVA) visual acuity with spectacles were examined before contact lens fitting and visual acuity with scleral lens (SLVA) were examined after fitting. Keratometry (K1, K2) were examined by corneal topographer *Oculus Pentacam* before scleral lens fitting. UCVA, BCVA and SLVA were analysed.

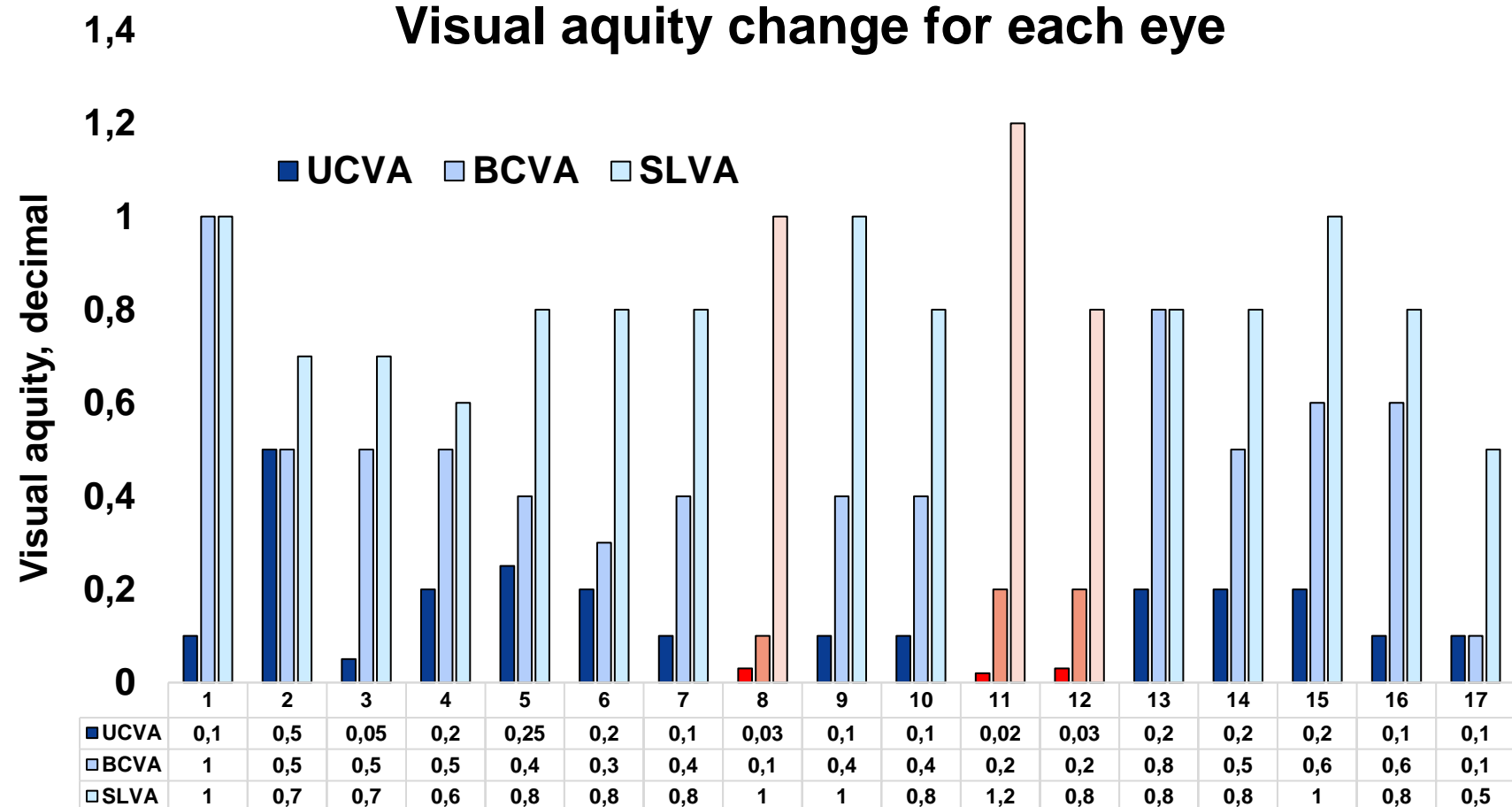


Research results

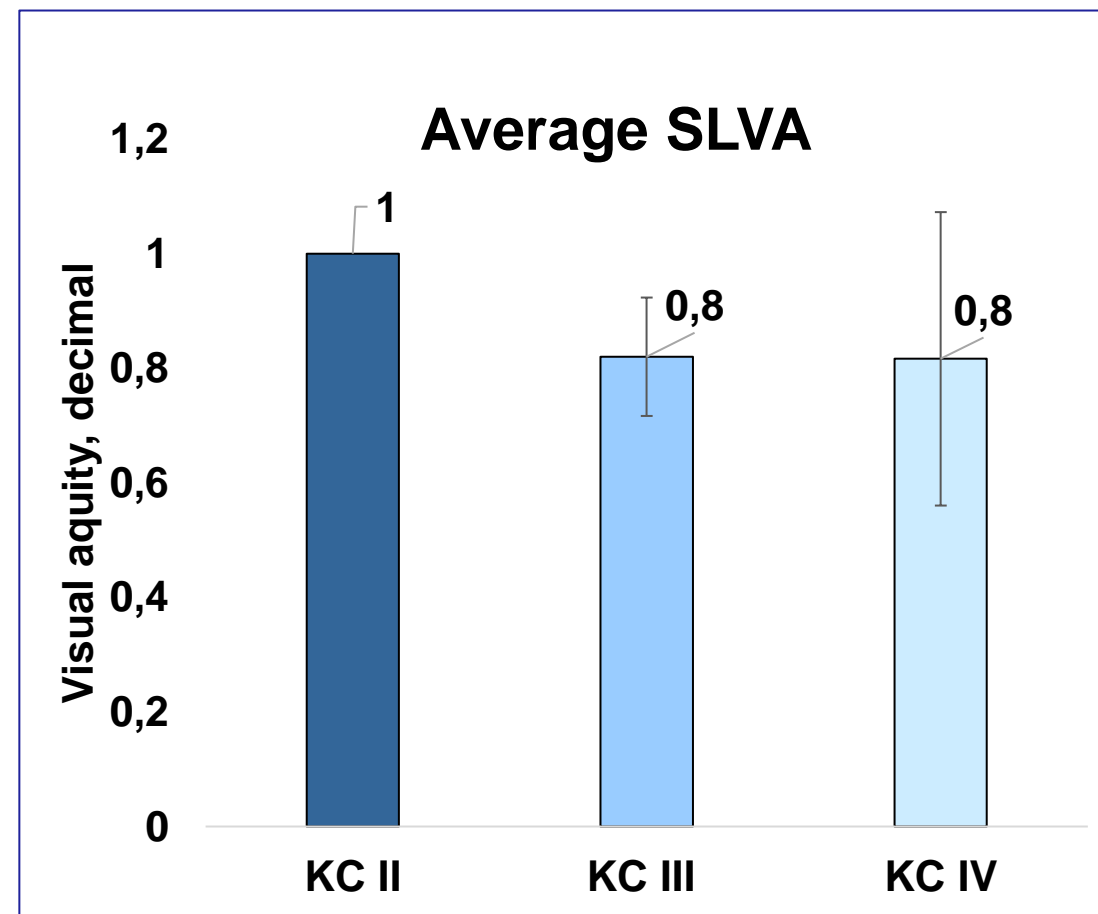
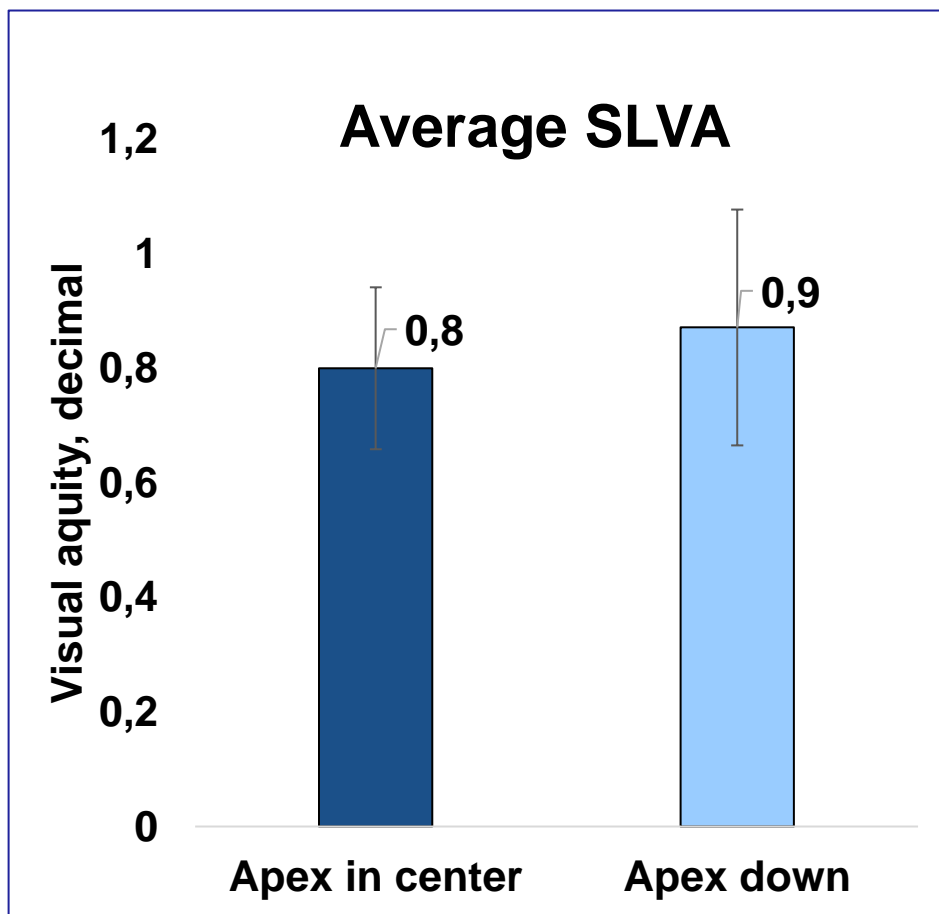
Average values of visual acuity



Visual acuity change for each eye



Research results



Conclusion

- Scleral lenses are a good and effective visual correction method for keratoconus.
- A significant increase in visual acuity can improve their visual performance and life experience.

