

ANTERIOR SCLERAL THICKNESS IN EYES WITH EARLY AND ADVANCED KERATOCONUS

M. Eliacik, S. Karaman-Erdur, C.A. Aslan, O. Muftuoglu

Department Of Ophthalmology, School Of Medicine, Istanbul Medipol University, Turkey

Purpose: Keratoconus is a slowly progressive, noninflammatory ectatic corneal disease characterized by changes in corneal collagen structure and organization .The aim of our study to assess differences in anterior scleral thickness between eyes with early and advanced keratoconus. Methods: A prospective, randomized comparative clinical intervention study.The study group consisted of 90 eyes of 45 patients with advanced keratoconus in one eye [group A ,mean central K \leq 53 diopters (D)].The fellow eye of each patient with early keratoconus [group B, mean central K \leq 53 (D)] formed the control group. Anterior sclera thickness measurements were performed using a Visante AS-OCT device. The enhanced high-resolution corneal scan mode was used to take scleral cross-sectional images at 135 and 45 degree to capture the four meridians of gaze. Results: Mean anterior scleral thickness of eyes in Group A and Group B was $475.5 \pm 24.91 \mu\text{m}$ and $550.86 \pm 20.39 \mu\text{m}$, respectively Scleral thickness was significantly thinner in advanced keratoconus eyes than in early keratoconus eyes. ($p=0,012$). Conclusion: In advanced keratoconus eyes the sclera is thinner than early keratoconus eyes. This result may be due to a rearrangement of tissue according to pathogenesis of keratoconus.