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Simultaneous topoguided photorefractive keratectomy (PRK)
followed by corneal collagen cross-linking (CXL) for the
treatment of keratoconus

Theme: Cornea - Surgical

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Abstract Details:

Purpose:

To present the results after simultaneous Photorefractive Keratectomy (PRK) followed by corneal collagen cross-linking (CXL) for the treatment of keratoconus.

Setting:

Institute of Vision and Optics (IVO), University of Crete, Crete, Greece.

Methods:

In this prospective case series, 22 patients (27 eyes) with progressive keratoconus participated. All patients underwent customized topography guided photorefractive keratectomy (PRK) immediately followed by corneal collagen cross linking with the use of riboflavin and ultraviolet - A irradiation.

Results:

Mean follow up was 10.72±5.98 months (range from 3 to 19 months). Mean preoperative spherical equivalent (SE) (diopters, D) and defocus were - 3.03 ± 3.23D and 4.67±3.29D while at the last follow up examination were significantly reduced to -1.29 ± 2.05D and 3.04±2.53D, respectively. Preoperative mean (LogMAR) Uncorrected Visual Acuity (UCVA) and Best Spectacle Corrected Visual Acuity (BSCVA) were 0.99±0.81 and 0.21±0.19 while at the last follow up examination were improved to 0.16±0.15 and 0.11±0.15 respectively. Mean preoperative steepest meridian keratometry from 48.2±3.4D was reduced to 45.13±1.8D at the last follow up examination.

Conclusions:

Simultaneous PRK followed by CXL seems to be a promising treatment capable of offering patients a functional vision and halting progression of the ectatic disorder. Longer follow up and larger case series are necessary in order to fully evaluate this new innovative combined procedure.

No Financial Interest