

Patient management in Pellucid Marginal Corneal Degeneration (PMCD)

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Pellucid marginal corneal degeneration (PMCD) is the second most common non-inflammatory ectatic disorder of the cornea behind keratoconus. It is characterized by a crescent-shaped band of inferior corneal thinning resulting in a characteristic flattening of the vertical meridian, while the central cornea is of normal thickness.

Spectacles or soft toric contact lenses often provide satisfactory vision during the early stages of PMCD, but not in advanced PMCD, because the amount of against-the-rule astigmatism results in substantial lens rocking. Here we present three PMCD cases managed using large-diameter RGP lenses.

The cases

Three patients with PMCD were referred for RGP fitting after corneal topography examination. The selection of the first trial lens was based on videokeratography (Keratron Piccolo, Optikon), manifest sphero-cylindrical refraction and a software (Easyfit, Menicon). Lens position and movement, fitting and surface wettability were evaluated with slit-lamp biomicroscopy.

Large diameter reverse-geometry lenses of high Dk material were used (Rose K2-IC series, Menicon) to achieve comfort and satisfactory vision. A systematic approach for fitting irregular corneas was followed including centration, peripheral fit, diameter and power assessment.

Case 1: A 68-year-old male. Both eyes were fitted with Rose K2-IC lens. Distance decimal VA improved from 0.5 (with spectacles) to 1.0 in RE and from 0.4 to 0.9 in LE. The patient reported also a reduction in ghosting of images and double vision.

Case 2: A 57-year-old male. His RE was fitted with Menicon Z BTC lens. Distance decimal VA improved from 0.8 (with spectacles) to 1.0. LE was fitted with a Rose K2-IC lens, with VA improving from 0.5 to 1.0. Among others, patient reported a reduction in dryness experienced with soft lenses fitted in the past.

Case 3: A 41-year-old hypermetropic male with progressed keratoconus in his RE and a PMCD in his LE and a pronounced anisometropia due to the difference in the pattern of the two keratectasias. RE was fitted with a RoseK2 while LE with a RoseK2-IC resulting to a 0.35 and 0.75 decimal VA in RE and LE, respectively.

In all cases a significant improvement in the VA with RGP lenses was observed while ghosting of images and double vision were reduced. Comfortable wear was achieved in all cases for at least 12h/day. Large-diameter reverse geometry RGP fitting seems to be the treatment of choice in PMCD.