Practical 4: Visualisation using qplot()

Laura Rodriguez Navas

February 2020

Keratoconus is a disorder that affects the cornea through an abnormal growth of collagen fibres. This makes the cornea become conical with an important vision loss. There are many possible treatments, but one common solution is the insertion of intrastromal corneal ring segments, such that the cornea is flattened.

The file "queratocono.csv" includes information about 394 patients with Keratoconus who were treated with ring placement. The variables that were recorded are: 1. K1: keratometry or main corneal curvature. 2. K2: perpendicular curvature to K1. 3. Ch: corneal hysteresis. 4. Na: number of rings (1 or 2). 5. Incision: angle in which the cornea is cut. 6. Prof: depth of the incision. 7. Diam: diameter of the incision. 8. Grosor: Incision thickness. 9. Longitud1: Angle of placement of the first ring (surgical parameter). 10. Longitud2: Angle of placement of the second ring (surgical parameter). 11. grosor1: Thickness of the first ring. 12. grosor2: Thickness of the second ring. 13. long1: arc length of the first ring. 14. long2: arc length of the second ring. 15. K1.salida: keratometry or main corneal curvature after the placement of the ring(s). 16. Astig: astigmatism curvature after the placement of the ring(s) (K1.salida – K2.salida).