Management of Cataract in Patients with Keratoconus

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diopters, cross linking is a must to obtain stable keratometric readings. High astigmatism in highly irregular corneas can be corrected by intracorneal stromal rings (ICRS) implantation which may be done in the same setting as corneal cross linking. IOL power calculation and cataract surgery can be done after that by 3 months.

Toric IOLs don’t have good results in irregular Cornea.

In middle aged patients (40 - 55 years), with high keratometric readings (more than 52 diopters), and evident corneal irregularity as shown by corneal tomography, the cornea should be treated first by ICRS, followed by biometry and cataract surgery after 3 months. As what was previously mentioned, keratometric readings should be obtained from the corneal tomography, optical biometry is efficient, and the formulas used are Haigis-L, Masket, and Shammas formulas.

In patients with advanced stages of keratoconus and clear corneas, deep anterior lamellar keratoplasty (DALK) could be done in conjunction with phacoemulsification, in these cases, standard keratometric readings are used (43 diopters) with the patients axial length using the suitable formula according to the patient’s axial length.

Opaque corneas with previous hydrops and scarring obviously require penetration keratoplasty with cataract extraction and IOL implantation.

Another solution in stable moderate stages of keratoconus, is to leave the patient aphakic, and to assess the need for IOL implantation 10 days later according to the patients refraction, a lot of patients do not need IOL implantation, and if needed, the adequate IOL power can be easily estimated using the refraction of the patient.

Bibliography

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