Refractive Correction in Childhood

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Usually we postpone refractive correction till late age of puberty to insure complete axial growth of the globe, for permanent appropriate correction according to the error and consistency of the cornea and anterior segment of the globe.

But there are indications where we have to perform refractive interferences in childhood.

It is known that the cornea acquires the adult diameter at the end of 2nd year of age; but the anterior chamber is usually flat at this early age.

Indications of interference are absolute or relative

Absolute indications:

- Anisometropia with difference more than 3D diopters which prevents binocular stereopsis vision leading to resisting amblyopia or squint.
- Unilateral aphakia either post-traumatic or post-operative in congenital cataract.

Relative indications

- Difficult or interrupted use of glasses or contact lenses in accommodative squint.
- Interference of glasses wearing with activities of the child as sports.
- Idiot children which needs constant supervision for glasses wearing.

Methods of refractive correction in childhood has its precautions which can be summarized as follows:

- In laser corneal refractive correction PRK is preferred to avoid surgical disruptions of corneal trauma as in LASIK flap formation or Femto Smile.
- Minimal corneal tissue ablation by Excimer laser with minimal optical zone to leave enough corneal thickness for future ablation correction; whatever the thickness of the cornea at time of PRK.
- In cases of cataract, posterior chamber lenses implantation is preferred peripherally in the bag. The reaction of the eye especially iritis and synchia’s are common in such surgeries and needs caution.
- Phakic IOI implementations can be applied in cases corneal thickness does not permit full laser correction.
- Corneal rings can be applied in correspondent cases or keratoconus with corneal thickness not less than 400U and preferred than keratoplasty.
- Repeated Lasik correction must be put in consideration in future age or other types of refractive surgeries.

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