Managing aphakia with contact lenses
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The incidence of infantile cataracts is 1.5 out of every 10,000 in the United States, but remains extremely visually detrimental due to deprivation myopia.\(^1,2\) Cataract extraction should take place as soon as possible, although extraction within the first month of life is associated with an increased risk of aphakic glaucoma.\(^1\) It has been shown that there is no statistical difference in visual outcome between IOL implantation and contact lens wear.\(^3\) However, additional intraocular surgeries are more frequent and overall cost is higher with IOL implantation as compared to contact lens wear.\(^4\)

Below are some advantages and disadvantages of contact lenses for gas permeable (GPCL) and soft contact lenses – specifically silicone elastomer (SCL).

**GPCL**
- Hyper oxygen-permeable, thinner materials\(^6\)
- Virtually any power, base curve
- Full refractive error corrected\(^7,9\)
- Easier insertion\(^5\)
- Increased lens awareness\(^5\)
- More prone to foreign bodies under contact lens\(^5\)

**SCL**
- Relatively easier to fit than GP\(^5\)
- Initial comfort superior to GP\(^5\)
- Silicon elastomer lenses FDA approved for 30-day continuous wear\(^5\)
- Less oxygen permeable\(^5,7,9\)
- Limited powers and base curves\(^5,7,9\)

One branch of the Infant Aphakia Treatment Study looked at differences between GPCL and silicone elastomer lenses. They observed no difference in median visual acuity between the two modalities at one year - even with GPCL being customizable to fully correct refractive error.\(^11\) They also found that on average, more GPCLs were utilized than SCL, due to ejection or lost contact lenses.\(^11\)

Since both SCL and GPCL are safe and equally effective, selection of material may be dependent on the individual doctor’s comfort and experience level with each. It should be noted with either modality, frequent follow-up examinations are vital to monitor power and fitting relationship changes, as well as potential contact lens related complications.

References:

5. Lindsay RG, Chi JT. Contact lens management of infantile aphakia. Optometry. 2010;93(1):3-14
10. Saltarelli DP. Hyper oxygen-permeable rigid contact lenses as an alternative for the treatment of pediatric aphakia. Eye Contact Lens. 2008;34:84–93

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