

## INTRODUCTION

Bilateral congenital cataracts are the leading cause of treatable childhood blindness<sup>1</sup>. In cases where the opacities in the crystalline lens are dense, surgery needs to be preformed quickly to prevent amblyopia.

There are different ways to correct aphakia in infants; these include an implantable lens and contact lenses. One of the main benefits of using a contact lens to correct for aphakia is the wide range of refractive error that can be treated<sup>2</sup>. The capsular bag of the lens continues to grow until the child is one year of age; therefore IOL implantation in children under one year in age is rarely standard of care<sup>1</sup>. In these cases, contact lenses become the best optical correction post lens extraction. Other advantages of contact lenses are the wide ranges of powers that are available to correct for high hyperopia in aphakic children.

## BACKGROUND

A four month old white male presents to clinic post cataract surgery wearing a contact lens.

4 months	Brand	Power	Base Curve	Diameter
OD	Silsoft	+32.00	7.7	11.3
OS	Silsoft	+32.00	7.7	11.3

ORx: -0.50+0.50X180 OD and -0.50DS OS

Initial GP	Power	Base Curve	Diameter
OD	+30.00	45.50	8.4
OS	+30.00	45.50	8.4

ORx: +2.25 OD and +1.25 OS

Fit: OD excessive movement dislodging temporal frequently that sits IT, OS still some central bearing not as bad as OD but well aligned edge  
 Clinical Decision: Due to the movement in the right eye, a larger diameter was chosen. A steeper base curve was incorporated in each eye with an Orx that should leave the patient 3.00D myopic.

8 months	Power	Base Curve	Diameter
OD	+33.50	47.25	8.6
OS	+33.25	46.50	8.4

At the followup visit 4 months later the patient was having issues with lenses falling out of both eyes after 4-5 hours of wear with the parameters below:

12 months	OD	OS
Power	+28.50	+24.00
Base Curve	46.00	46.50
Diameter	9.5	8.4
PC1	39.75/0.3	38.00/0.3
PC2	35.50/0.4	31.50/0.3

ORx: -2.00 DS OD, -1.50DS OS



Figure 1: Fit of lens that was falling out of eye

Clinical Decision: A larger diameter was chosen for each eye to improve centration and stability. Steeper PCs were also chosen to improve stability of the lenses on the eyes. The final order is shown below with the ORx incorporated.

Final Lens Order	OD	OS
Power	+29.00	+25.00
Base Curve	45.75	46.00
Diameter	9.7	9.5
PC1	40.25/0.3	38.50/0.3
PC2	36.50/0.4	32.50/0.4

At the 4 week followup, this lens was tolerated well by the patient, and reduced issues of lenses falling out.

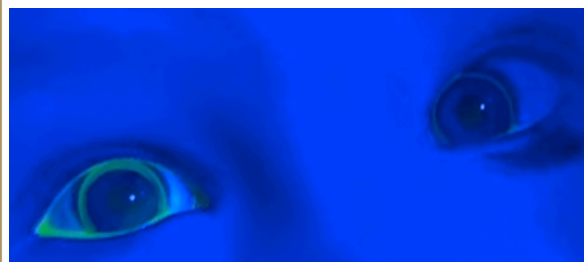


Figure 2: Photo of final lens on the patients eyes

## DISCUSSION

The standard of care for congenital cataracts is to keep the child aphakic and to correct the refractive error with contact lenses and supplement with patching, following crystalline lens extraction<sup>2</sup>.

One of the main advantages of contact lenses are the wide ranges of power available to be ordered in. There are two main lenses (silicone elastomers and GP lenses) that are typically used<sup>2</sup>. Each have their advantages and disadvantages. One of the main advantages of silicone elastomer contacts is the high oxygen transmission that allows the lens not have to be removed daily which can be advantageous to busy parents<sup>3</sup>. Whereas, GP lenses need to be removed every night. In this case, the limitations of the power of the silicone elastomer lens (Silsoft) could not be ordered in a high enough power, therefore, we fit a GP lens that gave us more control of individual lens parameters with a larger range of powers.

## CLINICAL PEARLS

This case demonstrates the important option of gas-permeable lens in fitting a pediatric aphakic patient, and the careful consideration of different lens options to find the perfect fit.

## REFERENCES

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