

Preventing Visual Axis Obscuration

Vladimir Pfeifer
University Eye Hospital Ljubljana

Our goal

- Clear visual axis
- Forever
- No need for repeated general anesthesia
- Refraction

Decision making

- The pathology and anatomical situation determines if the IOL should be implanted in congenital cataract and not the age of child



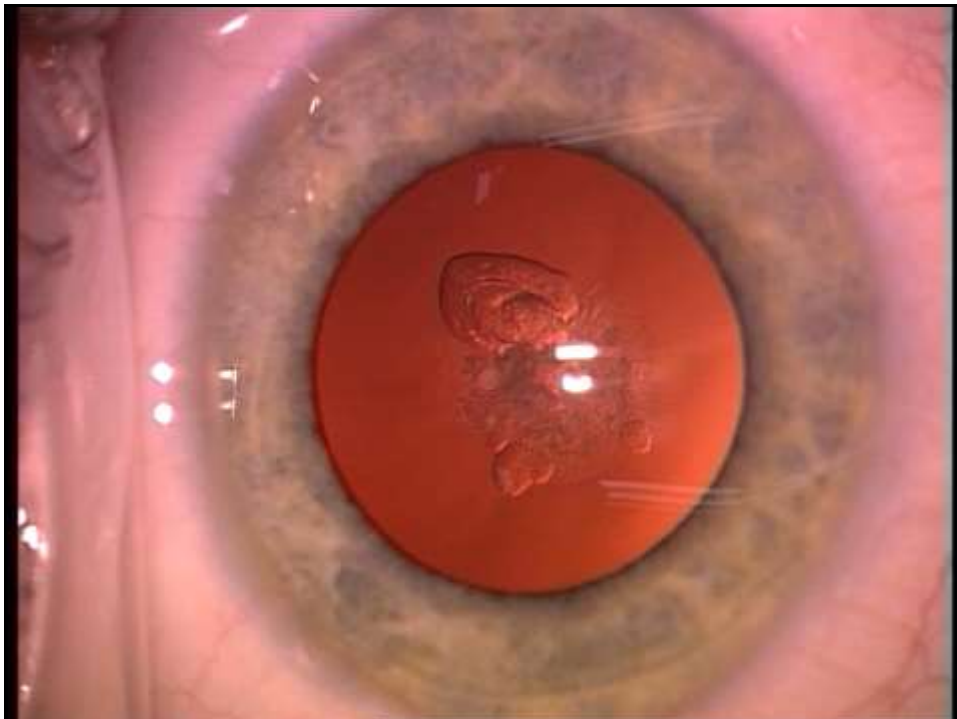
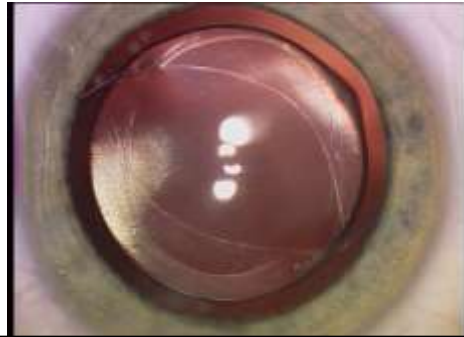
Implant IOL or not criteria

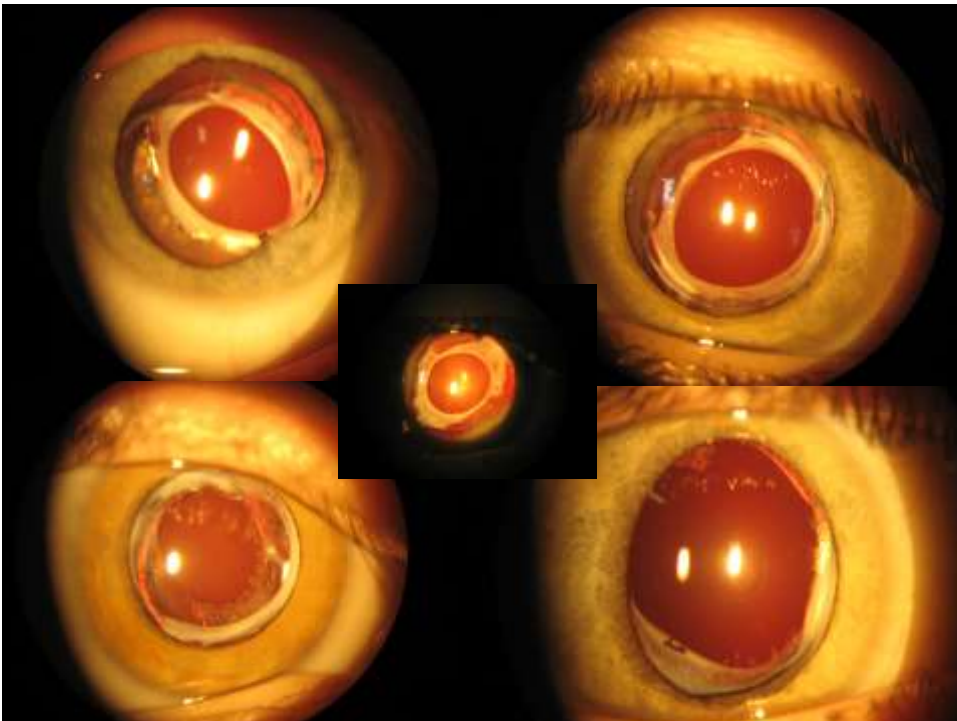
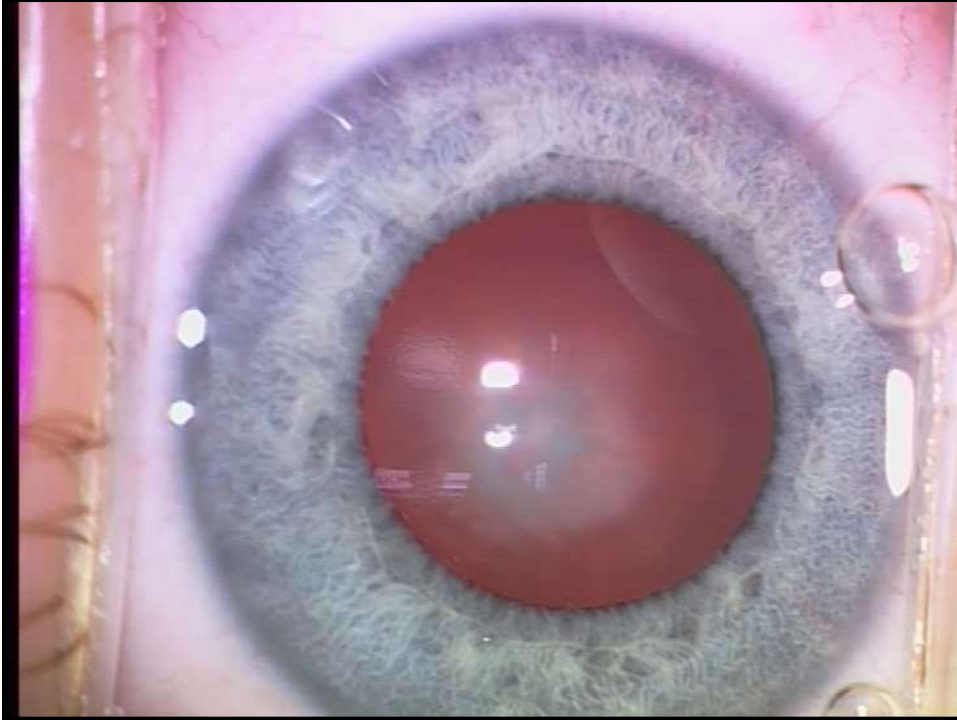
- Anterior CCC
- Posterior CCC
- Anterior vitrectomy

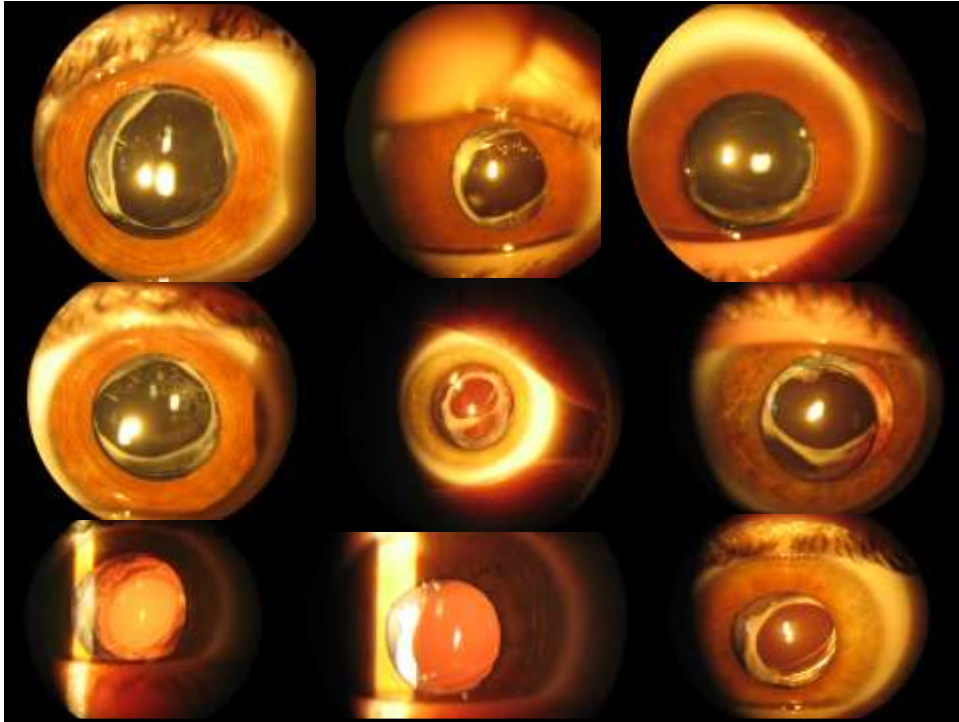


What lens and how to implant

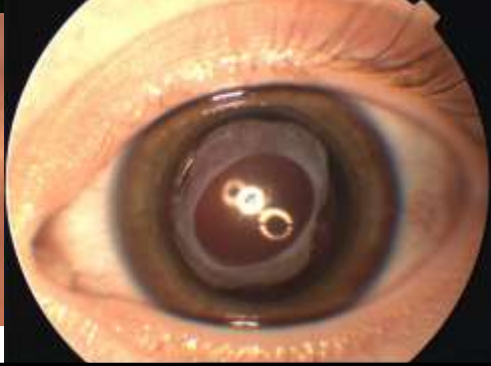
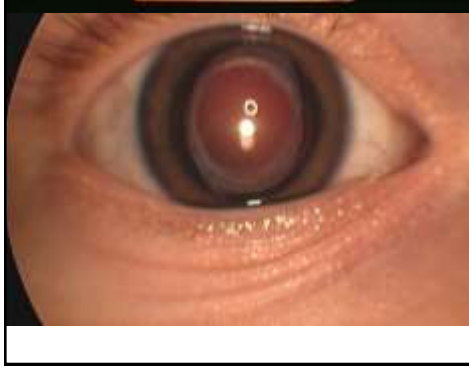
- 3 piece IOL (the IOL should enable the optic capture or buttonholing. The anterior and posterior portion of CCC should stick together.
- Bag in the lens

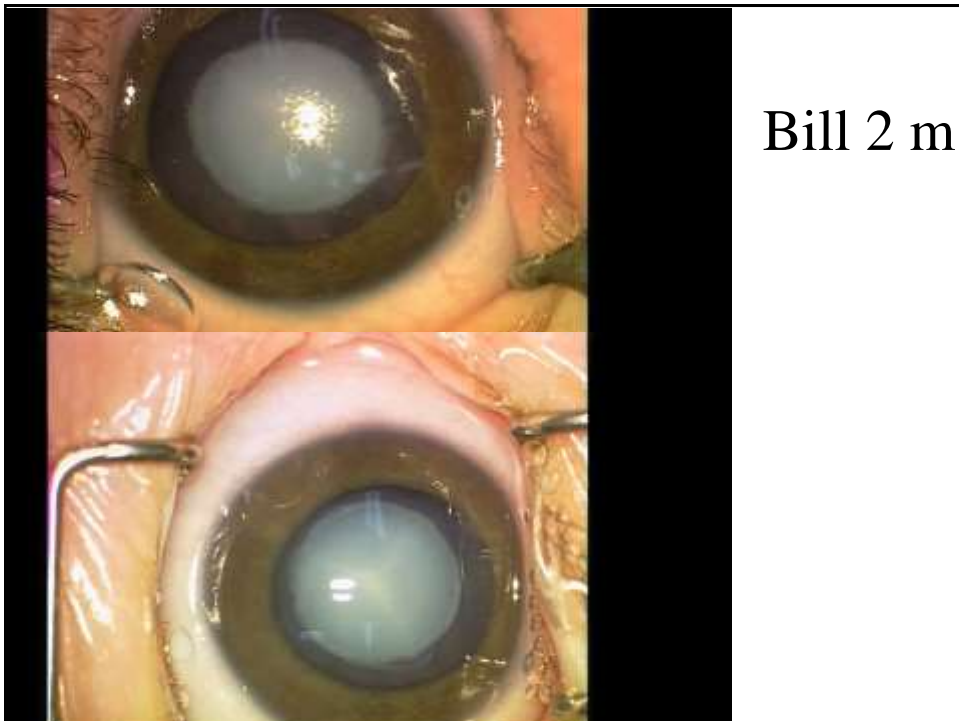


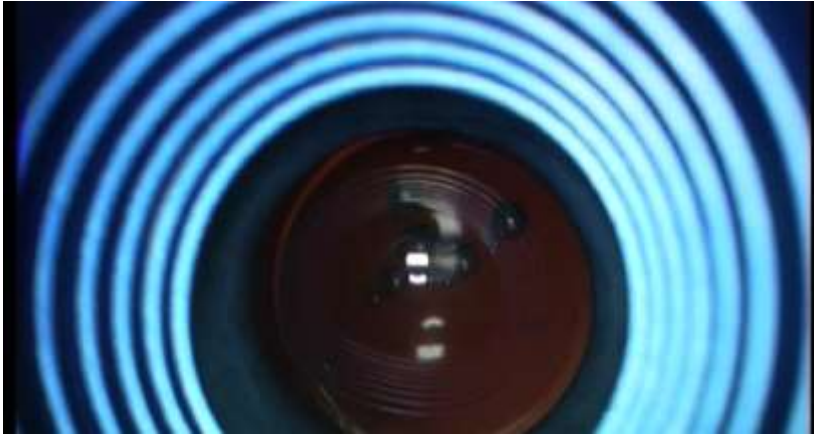




5 Years after
VA RE 0.5 sc
VA LE 0.5 sc
Fusion -1+13

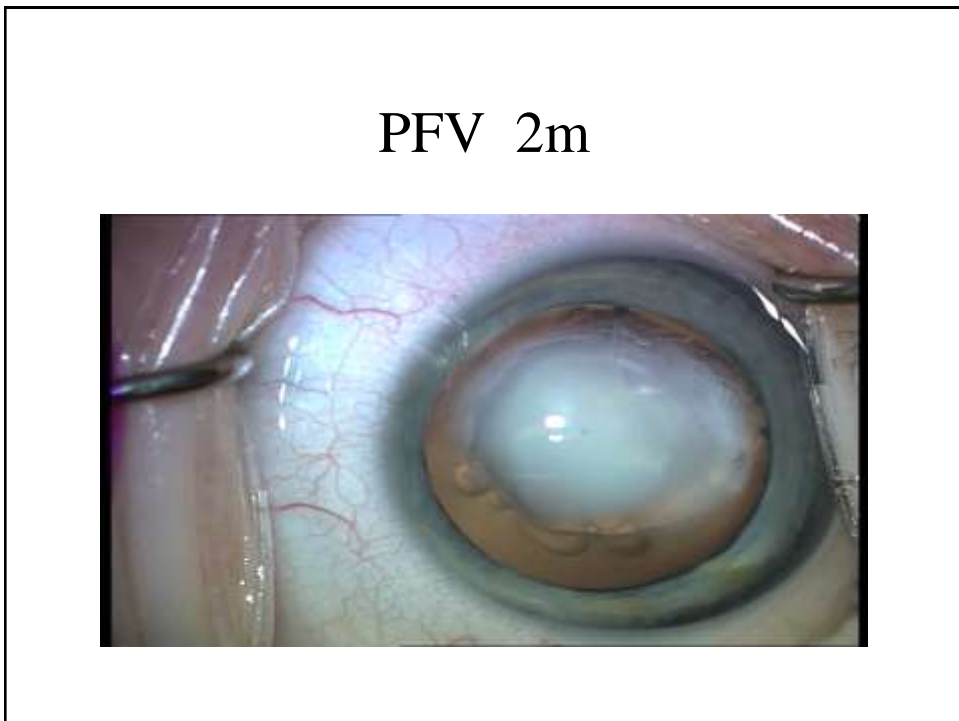
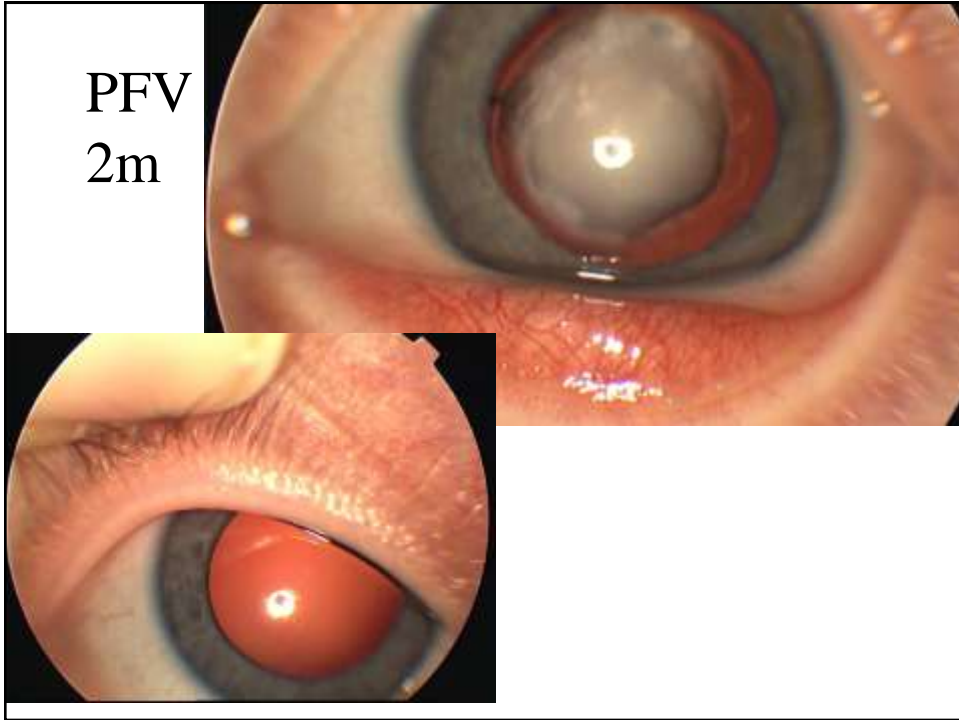


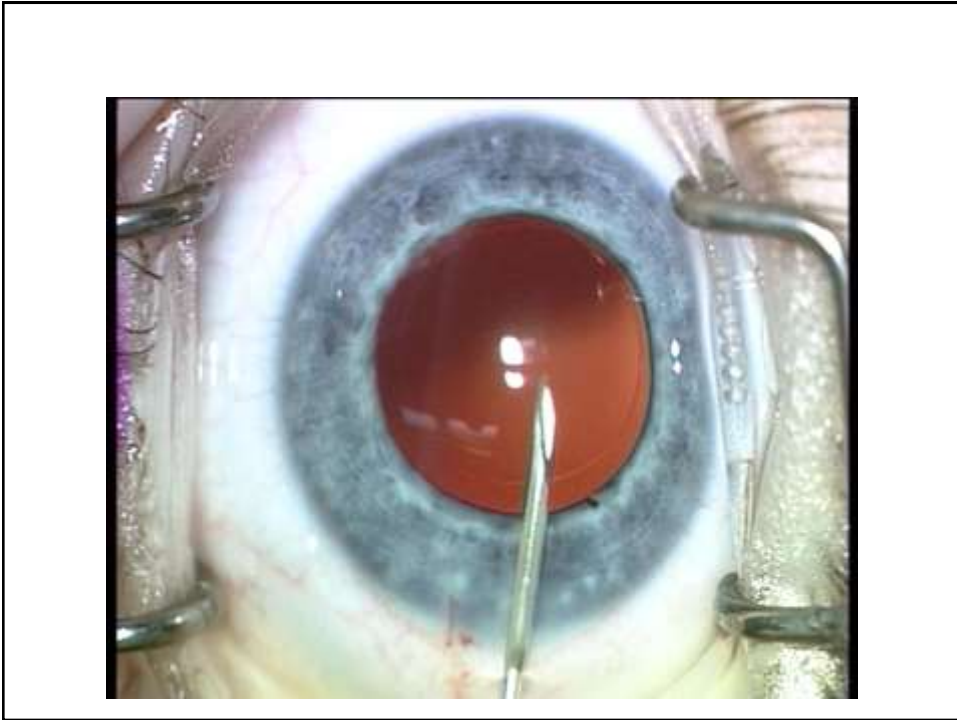




Persistent Fetal Vascular Syndrome

In addition to the microphthalmia in some cases, the thick posterior capsular complex can be quite difficult to remove. This complex is formed from a combination of capsule and fibrovascular tissue that remains after partial regression of the secondary vitreal structures





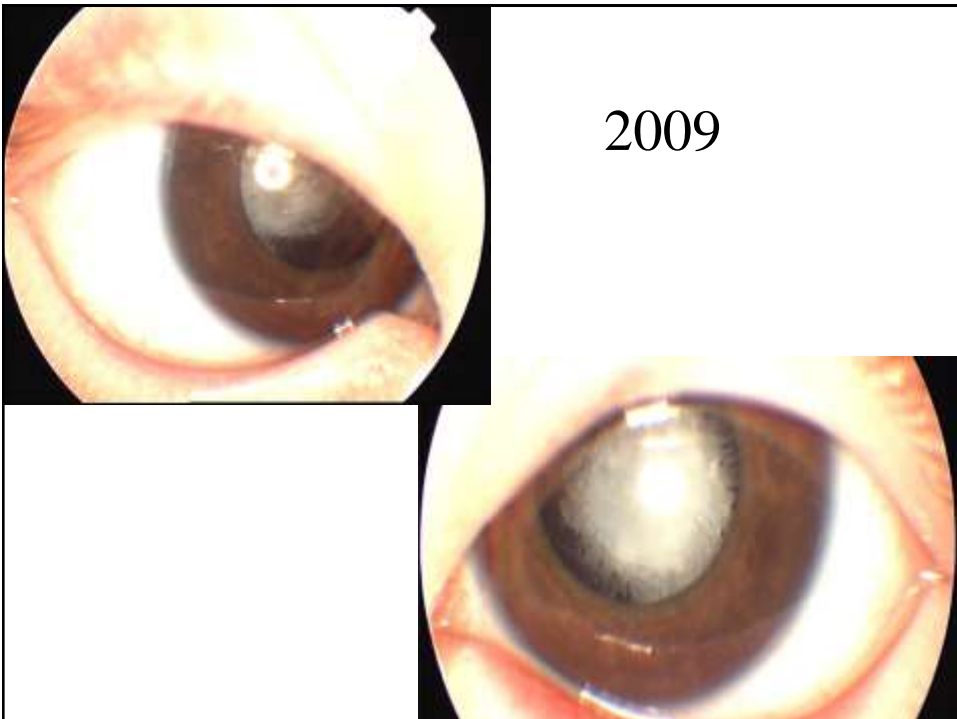
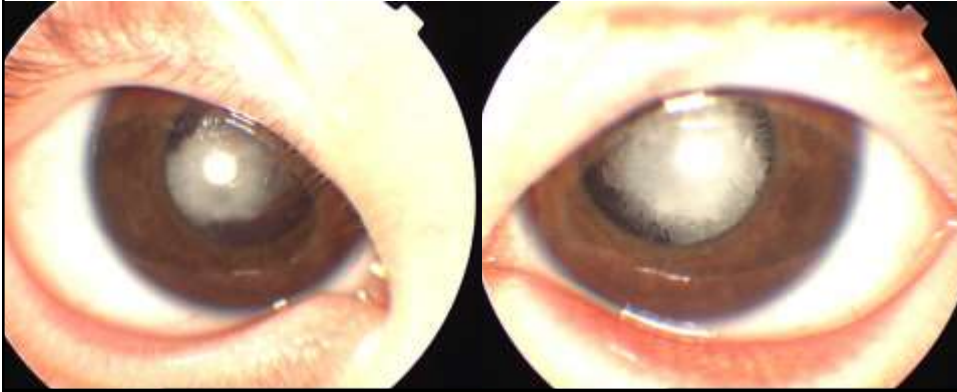
2012

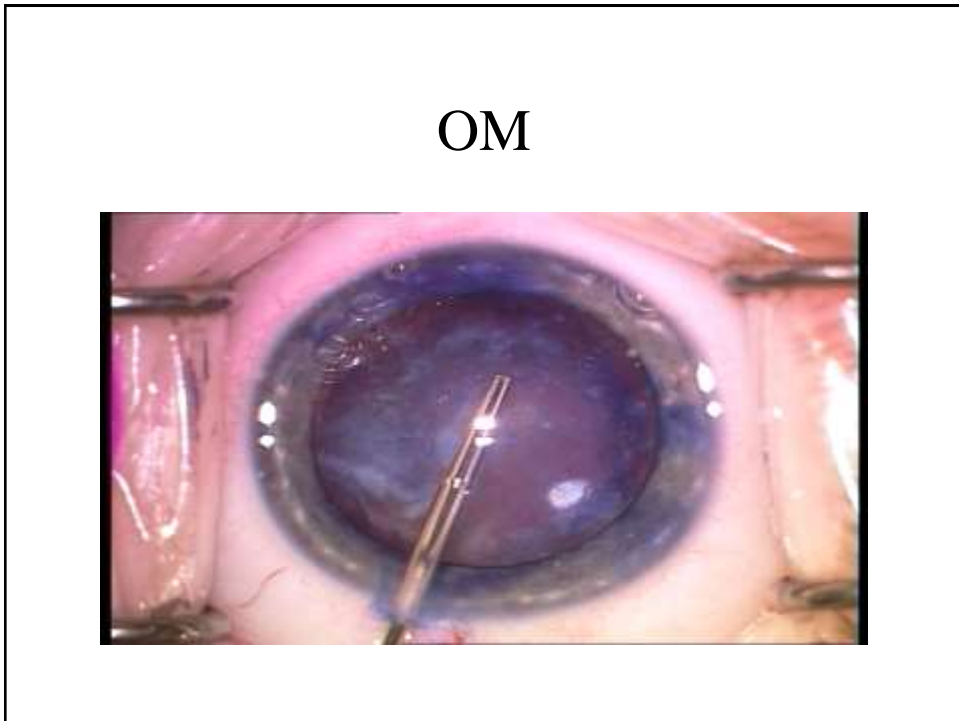
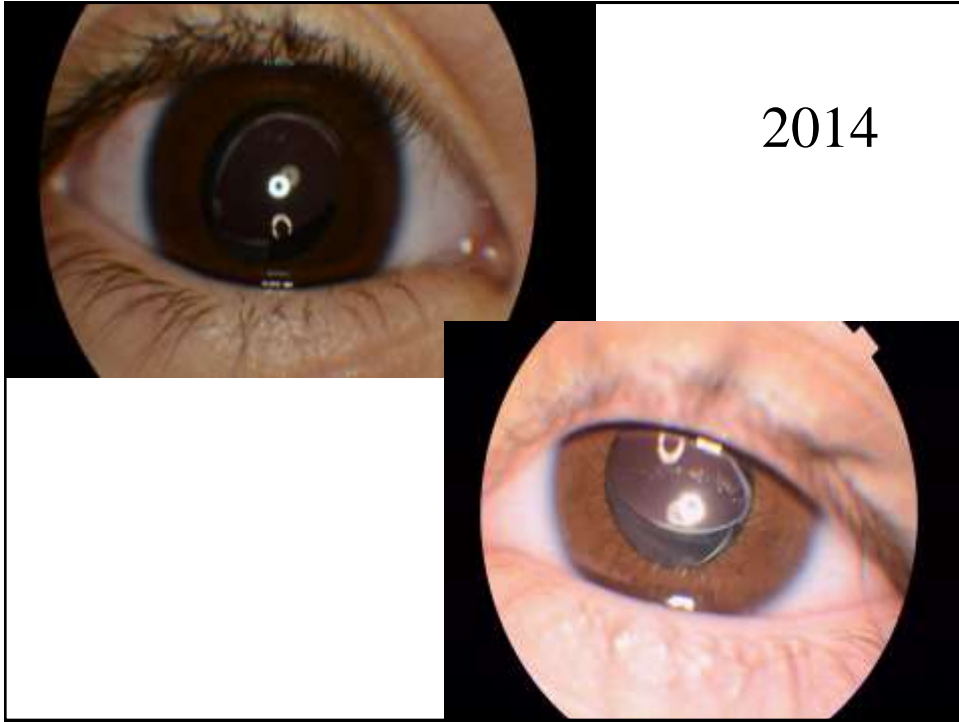


Preop

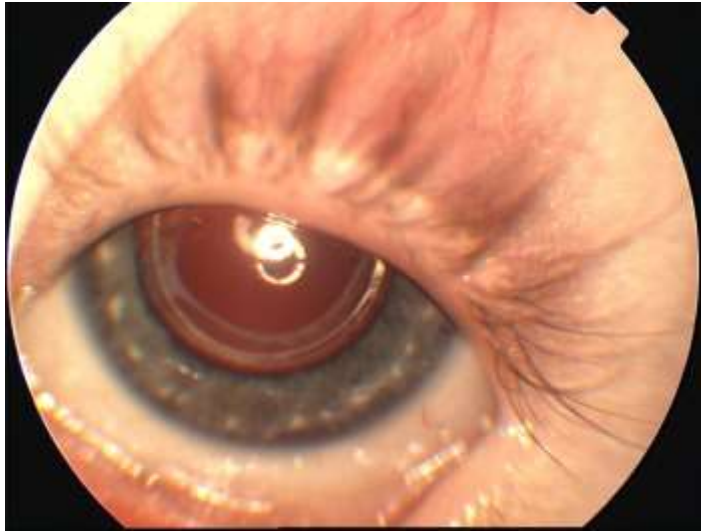
- Light perception
- rowing eye movements
- Surgery at 5 and

4 months





OM 2015



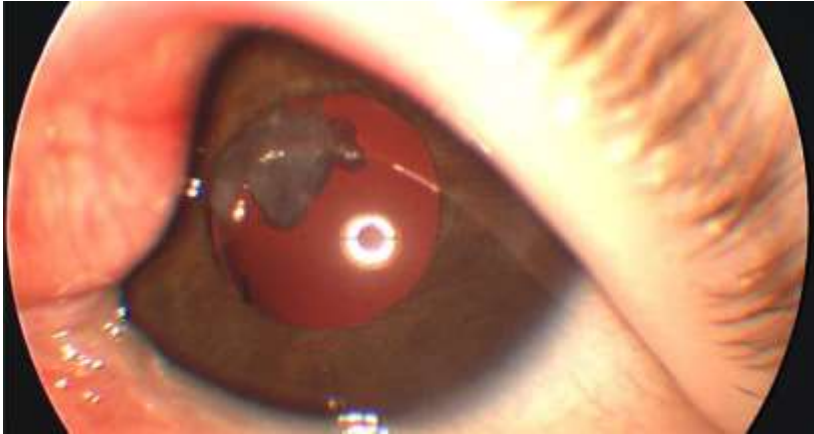
2009



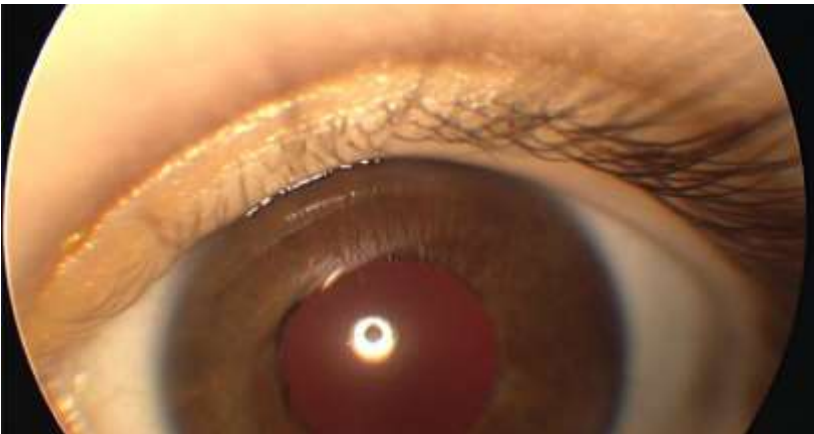
BN 6m

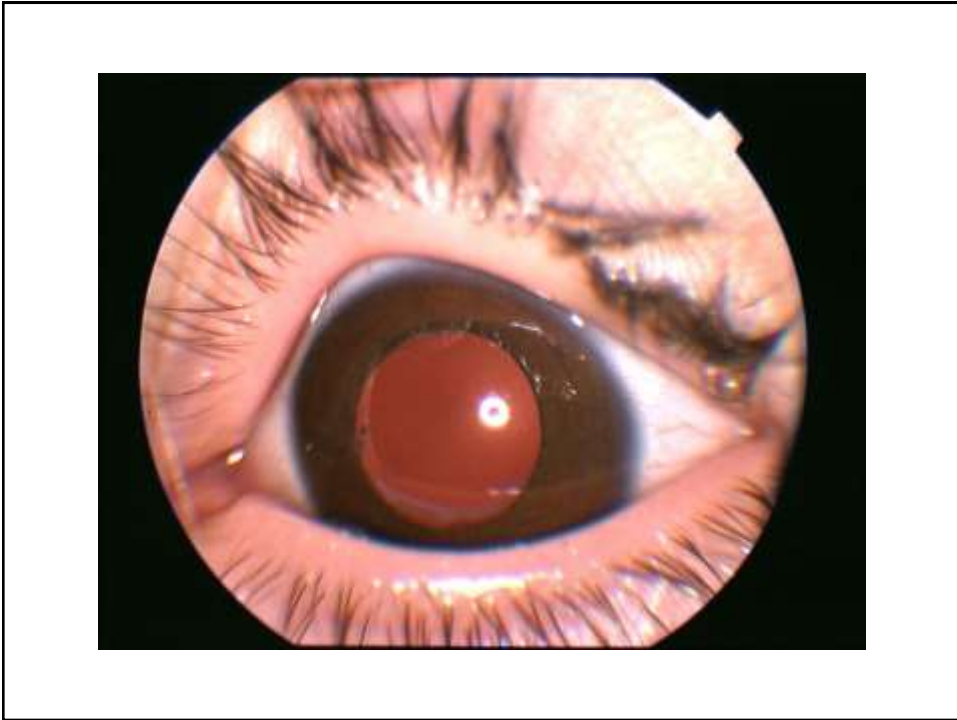


2010 BN

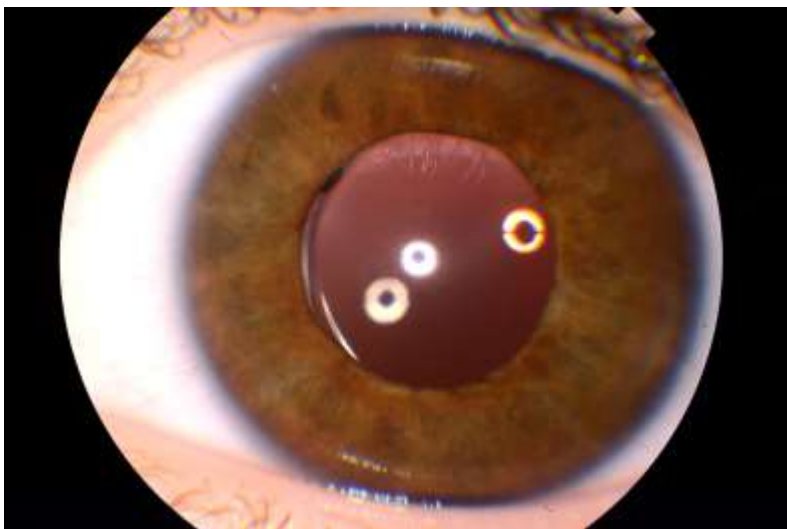


2011





BN 2014





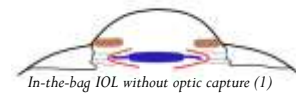
Operated eyes were divided in two groups:

1) Aphakic (n=6)

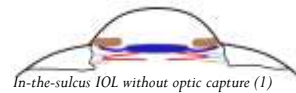
- Microphthalmus (3)
- Uveitis (1)
- Insufficient capsular support (2)

2) Pseudophakic (n=22)

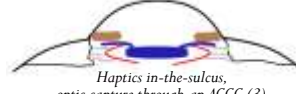
- 3-piece IOL
- With optic capture (20)
- Without optic capture (2)



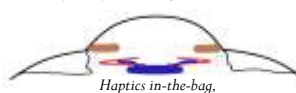
In-the-bag IOL without optic capture (1)



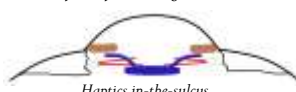
In-the-sulcus IOL without optic capture (1)



Haptics in-the-sulcus, optic capture through an ACCC (3)



Haptics in-the-bag, optic capture through a PCCC (7)



Haptics in-the-sulcus, optic capture through an ACCC and a PCCC (10)

- 20 children (28 eyes) participated in this retrospective study. All eyes underwent congenital cataract surgery within the first 12 months of life (mean 5.7 ± 2.9 months, range: 1.6-11.9)

- After at least 5-year follow-up (mean 6.5 ± 1.8 years, range: 5.0-8.9) a secondary procedure was performed to clear visual axis in 2/22 pseudophakic eyes and in 2/6 aphakic eyes

- Visual axis remained clear in more than 90% of eyes with primarily implanted IOL. Surgical technique which included PCCC with anterior vitrectomy, optimally followed by 3-piece-IOL implantation in the capsule with optic capture, proved to be effective in our series of children. Aphakic eyes developed VAO in 30% at the mean follow-up of 6.5 years.

IOL placement

Post cataract surgery glaucoma rate at University Eye Clinic in Ljubljana

IN THE SULCUS PLACEMENT

6.7 ± 3.0 age at operation (months)

5.8 ± 3.0 follow-up (years)

5/10 (50%)

glaucoma rate (%)

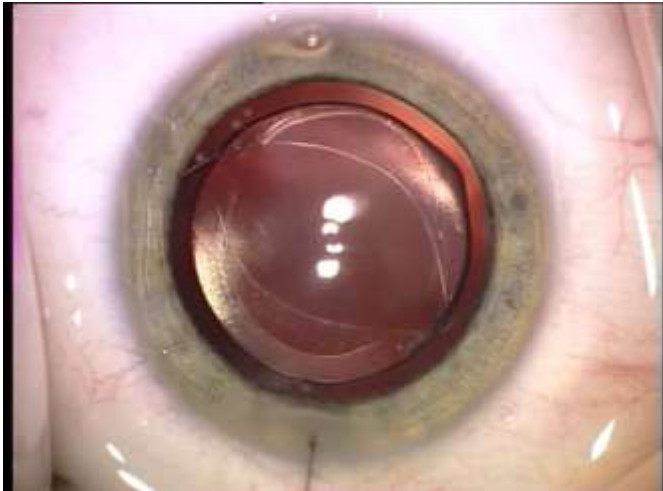
IN THE BAG PLACEMENT

6.5 ± 2.7

6.4 ± 3.6

4/24 (17%)

*Results presented at ESCRS 2014



Conclusion

Proper surgical technique can diminish or eliminate need for secondary surgery and repeated general anesthesia

Thank you