

Optico-reconstructive surgery in children  
with congenital cataract and aniridia  
on the basis of implantation  
of the irido-lens complex "Artificial Iris + IOL"

*Author has no financial interests*

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# Purpose

To evaluate the effectiveness of the implantation of irido-lens complex "Artificial iris-IOL" ("MIOL-Iris") in children with congenital cataract and aniridia.

# Methods

Nine children (18 eyes) aged 5 to 17 years with congenital cataract and aniridia were examined and operated. Microphakia was noted in 5 patients, dystopia of lens – in 2 cases. Keratopathy was revealed in 3 children, secondary compensated glaucoma – in 2 cases. Corrected visual functions were on average  $0,05 \pm 0,01$ . Follow-up period was 5 years after surgery.

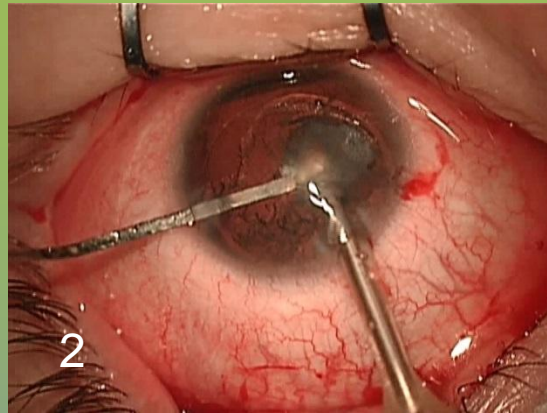
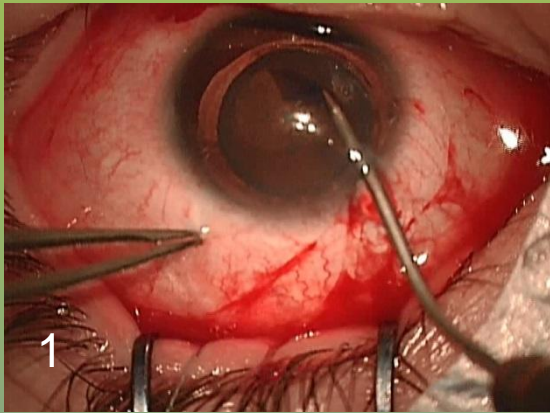


# Methods

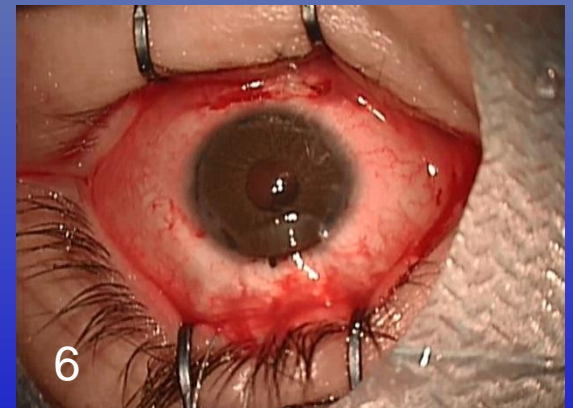
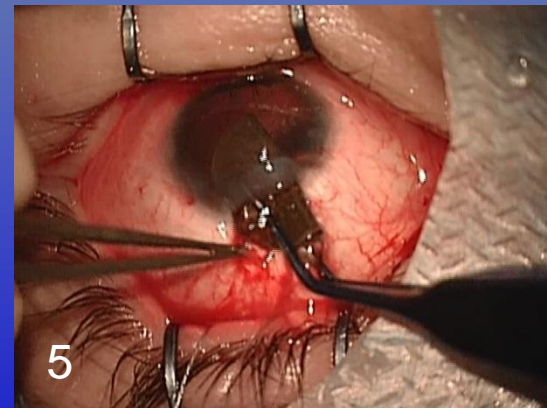
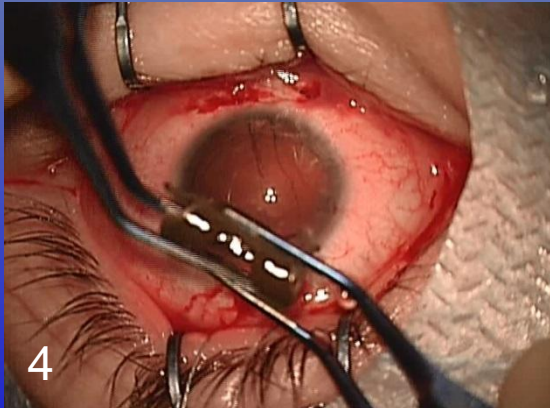


For implantation the polymer disk-shaped optical-haptic monolithic irido-intraocular IOL "MIOL-Iris" (production "Rapper-NN" Russia) was used. Irido-lens complex was implanted into capsular bag or on a capsular support with fixation into the ciliary sulcus. In the absence of capsular support it was sutured to sclera. Iris color was chosen by the child's wishes or his parents.





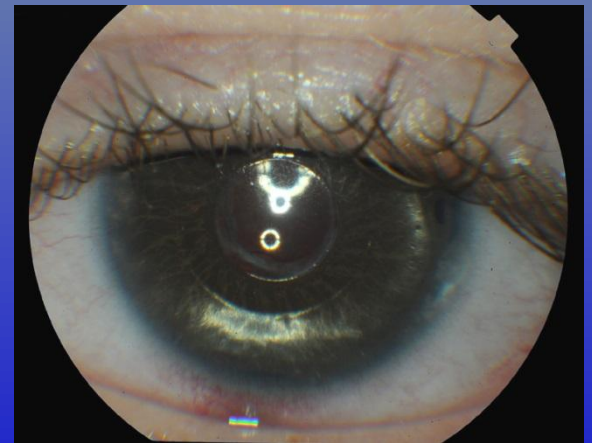
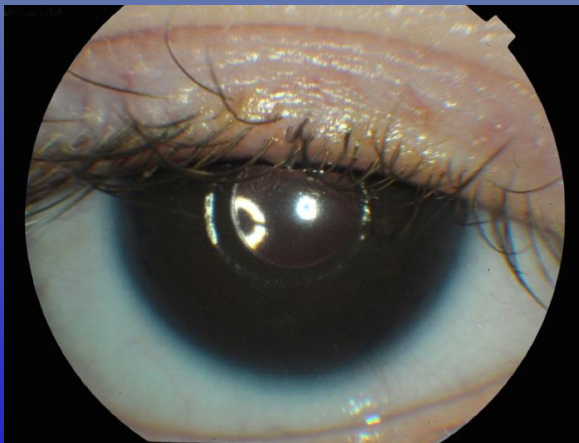
1. Anterior capsulorhexis with 6.0 mm diameter
2. Phacoaspiration
3. Artificial iris in container
4. Flexion of iris / IOL block by pincers
5. Implantation of block trough 4,5 mm corneal incision
6. Eye after iris / IOL block implantation





# Results

Visual acuity after surgery improved to 0, 1±0, 02 ( $p<0.001$ ). The decrease of photophobia and satisfactory cosmetic effect were noted in all children. In the first 3 months after surgery an increase of intraocular pressure (IOP) to 27-32 mm Hg was noted in 61.1% of cases. Antiglaucomatous surgical procedures were performed in 2 children (3 eyes). In other cases IOP was compensated with medicaments. In 66.7% of cases the clinically significant fibrosis of posterior capsule of lens was revealed. It was removed by laser discision. In both eyes of 2 patients the progression of prelimbic keratopathy was noted in 1 and 2 years.



# Conclusions

Implantation of complex "Artificial Iris + IOL" in children with aniridia and cataract allows to improve the medico-social prognosis of disease. However, complications developing in the long term period require maintenance of complex solution of of rehabilitation problems of such patients.

