

PHAKIC INTRA OCULAR LENSES IN CHILDREN

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FINANCIAL DISCLOSURES

NONE

AIM

To evaluate the role and safety of phakic intra-ocular lenses in the treatment of high refractive errors and amblyopia in pediatric patients.

PATIENTS AND METHODS

- 9 eyes of 7 children underwent phakic intra ocular lenses implantation to treat high myopia
- Age of patients was between 9 to 17 years old
- In 5 cases it was a unilateral implantation, in 2 cases it was bilateral implantation.
- Refractive range was between -11 and -27
- Lenses used in eyes were: 5 ICL / 4 IPCL
- Follow up was done for a minimum of 6 months and 2 years.

WE EVALUATE

Post-operative refraction

Anterior segment

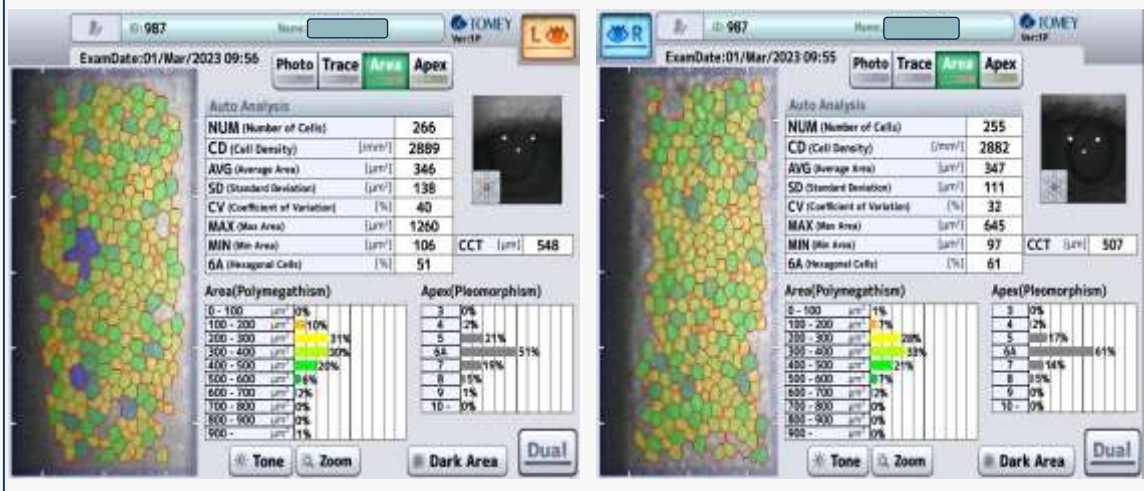
Posterior segment

Specular microscopy

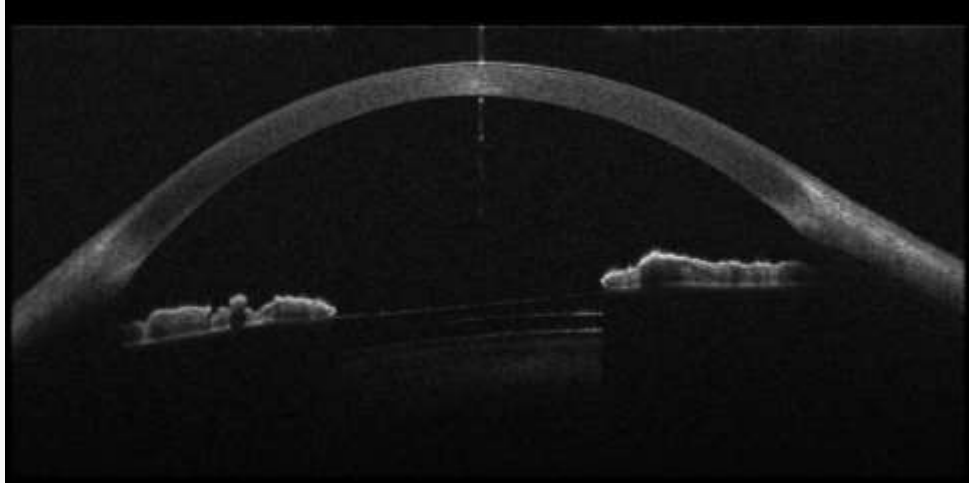
IOP

Vault

➔ POST-OP SPECULAR MICROSCOPY



➔ POST-OP VAULT



RESULTS

EYES	AGE	SEX	BCVA	REFRACTI ON PRE-OP (SE)	ACD (mm)	WTW CALIP ER	PRE-OP SPEC	IOL	POST OP-REF (SE)	BCVA	SLIT LAMP	VAULT	PATCHING
1.	17	F	0.2	-14	2.99	11.5	2811	ICL	-1	0.4	CALM	403	+
2. RE	11	M	0.3	-15	3.11	11.5	3110	ICL	-0.75	0.6	CALM	467	+
3. LE	11	M	0.2	-17	3.20	11.5	3215	ICL	-1.25	0.5	CALM	273	+
4.	11	F	0.2	-23	3.23	12	2953	IPCL	-0.5	0.3	CALM	380	+
5. RE	9	F	0.1	-27	3.17	11.5	3050	IPCL	-0.75	0.7	CALM	340	+
6. LE	9	F	0.1	-27	3.23	11.5	3035	IPCL	-1	0.7	CALM	355	+
7.	12	M	0.3	-17	3.08	12	2980	ICL	-0.5	0.5	CALM	408	+
8.	14	M	0.4	-15	3.33	12	2887	IPCL	-0.75	0.6	CALM	391	+
9.	13	F	0.2	-11	3.17	11.5	3020	ICL	-1.25	0.6	CALM	415	+



RESULTS

In all the cases

- Post operative refractions were **-0,86**
- VA was **0,54**
- Anterior and posterior segments were **clear**
- Vaults were **381,33** microns

All cases needed amblyopia treatment with improvement of 3 lines of VA (2 to 5 lines)

COMPLICATIONS

- Endothelial cell loss: **NONE**
- Cataract : **NONE**
- Pigment dispersion with glaucoma: **NONE**
- Shallow anterior chamber: **NONE**

DISCUSSION

- Management of pediatric high ametropia , unilateral or bilateral one , is challenging.
- The advantages of Phakic IOLs are numerous :
- Predictability
- Quick visual recovery
- Preservation of accommodation
- Reversibility
- Preservation of corneal biomechanics
- Prevent amblyopia

CONCLUSION

Refractive surgery is an elective procedure reserved to adult patients. However, in Children with high anisometropia or malignant myopia, implantation of phakic intra ocular lenses could be considered for its efficiency and safety.

REFERENCES



THANK YOU

- [A clinical trial on phakic intraocular lenses for the treatment of refractive amblyopia in children and adolescents.](#) Morya AK, Kaur K, Gurnani B, Janti SS, Shrivastava AK, Tejaswini A, Sinha A, Venkatesh D. Indian J Ophthalmol. 2023 Mar;71(3):804-809. doi: 10.4103/IJO.IJO_2567_22.PMID: 36872683
- [Refractive Surgery for Special-Needs Children with High Myopia.](#) Tychsen L. Mo Med. 2022 Jan-Feb;119(1):60-64.
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- [Phakic intraocular lens implantation for treatment of anisometropia and amblyopia in children: 5-year follow-up.](#) Alió JL, Toffaha BT, Laria C, Piñero DP.