



Letter to the Editor Re: Predictive Factors of Complications and Visual Outcomes after Pediatric Cataract Surgery: A Single Referral Center Study from Türkiye

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Keywords

Congenital cataract, aphakia, visual outcomes, complications, posterior optic capture

Dear Editor,

We have read Dericioğlu et al.'s¹ study entitled "Predictive Factors of Complications and Visual Outcomes after Pediatric Cataract Surgery: A Single Referral Center Study from Türkiye" with great interest. However, we would like to share with our colleagues some issues that we believe will be useful for the entire readership and are important to clarify.

Pediatric cataract surgery involves serious intraoperative and postoperative complications, and the management of surgery remains a challenging issue for surgeons.² The first of these problems is whether the patient will be left aphakic or an intraocular lens (IOL) will be implanted. The authors left some of the patients older than 12 months (group IIA, n=21 eyes) as aphakic. Among these patients, were there cases in which the integrity of the capsular bag was completely disrupted and was scleral IOL fixation considered in these cases? On the other hand, according to their results, pseudophakic eyes (0.49 ± 0.40 logarithm of the minimal angle of resolution [logMAR]) had significantly better final best-corrected visual acuity than aphakic eyes (0.65 ± 0.59 logMAR). This reflects that IOL implantation is important for better visual outcomes in patients older than 12 months.

The authors reported pupillary membrane development in 5 cases (4 [10.5%] in group 1 and 1 [4.8%] in group 2), and the postoperative treatment protocol included the use of 1% prednisolone acetate four times a day for one month. To avoid this complication, we would like to underline that, in addition to a more intense topical anti-inflammatory treatment protocol, intraoperative intracameral triamcinolone acetonide, which we frequently use in pediatric cataract surgery in our clinical practice, can be extremely beneficial.^{3,4}

On the other hand, the authors performed posterior continuous curvilinear capsulorhexis (CCC) in all cases and stated that they did not perform anterior vitrectomy except

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for unintentional anterior hyaloid rupture. They also reported visual axis opacification in 8 cases (4 [10.5%] in group 1 and 4 [19.0%] in group 2) in the postoperative period. In order to overcome this problem, prevent visual axis opacification, and avoid serious vitreous-related complications after anterior vitrectomy, it has been reported that posterior optic capture (optic capture buttonholing) combined with posterior CCC can be an effective and safe alternative, without routinely performing anterior vitrectomy.⁵

Once again, we congratulate the authors for this new and different study, and we think that prospective, randomized advanced clinical studies with more pediatric cataract patients from multiple centers in the future will further shed light on this issue.

Ethics

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References

1. Dericioğlu V, Sevik MO, Bağatur Vurgun E, Çerman E. Predictive Factors of Complications and Visual Outcomes after Pediatric Cataract Surgery: A Single Referral Center Study from Türkiye. *Turk J Ophthalmol.* 2023;53:267-274.
2. Vasavada AR, Nihalani BR. Pediatric cataract surgery. *Curr Opin Ophthalmol.* 2006;17:54-61.
3. Chou YY, Zhang BL, Gan LY, Ma J, Zhong Y. Efficacy of intracameral preservative-free triamcinolone acetonide in pediatric cataract surgery: a meta-analysis. *Graefes Arch Clin Exp Ophthalmol.* 2020;258:2205-2212.
4. Ucar F. Intraocular lens implantation with flattened flanged intrascleral fixation technique in pediatric aphakia. *J AAPOS.* 2022;26:8.e1-8.e7.
5. Kohnen T, Davidova P, Lambert M, Wenner Y, Zubcov AA. Posterior continuous curvilinear capsulorhexis with anterior vitrectomy vs optic capture buttonholing without anterior vitrectomy in pediatric cataract surgery. *J Cataract Refract Surg.* 2022;148:831-837.

Reply

We would like to thank Dr. Uçar for his insightful comments and interest in our study titled "Predictive Factors of Complications and Visual Outcomes after Pediatric Cataract Surgery: A Single Referral Center Study from Türkiye."¹ His observations and suggestions are valuable contributions that merit further discussion and consideration within the context of pediatric cataract surgery.

Regarding the management of patients older than 12 months left aphakic in our study, we appreciate your query concerning cases where the integrity of the capsular bag was disrupted, possibly necessitating scleral intraocular lens (IOL) fixation. We excluded patients who underwent secondary IOL implantation, and among the cases where patients were left aphakic, there were no instances of complete capsular bag disruption that warranted scleral IOL fixation in the primary surgery. However, we acknowledge the significance of this consideration and its potential impact on surgical outcomes, particularly in cases involving compromised capsular integrity, which could benefit from scleral IOL fixation method.²

This retrospective study covers a period of 10 years, and although IOL implantation was performed in some patients during this period, our clinic's protocol for pediatric cataract cases primarily involves utilizing aphakic contact lenses for patient follow-up. In addition, as stated in the methodology section, select patients received IOLs primarily based on socioeconomic considerations and the potential impracticability of employing contact lenses. The debate about the optimal approach -aphakic versus IOL implantation- for pediatric cataracts continues. Notably, a large-scale prospective study discouraged routine IOL implantation in children under the age of 2 years.³ Conversely, a recent meta-analysis suggests that IOL implantation results in better visual acuity but with an increased risk of visual axis opacification.⁴ Consequently, we advocate for larger-scale studies to comprehensively elucidate this intricate issue.

The use of intracameral triamcinolone in pediatric cataract cases is routinely performed in our clinic following the completion of posterior curvilinear capsulorhexis (PCC). However, your suggestion of a more intense topical anti-inflammatory treatment, along with intraoperative intracameral triamcinolone acetonide subsequent to both PCC and viscoelastic removal holds promise in potentially reducing such complications. Moreover, studies investigating posterior optic capture alongside PCC have reported fewer fibrinous complications, while randomized prospective studies have demonstrated comparable long-term outcomes between IOL implantation in the capsular bag and the mentioned technique.^{5,6} In addition to the methodology employed in this single-center retrospective study, investigating the posterior optic capture technique may hold significance in the management of fibrin reactions in pediatric cataracts.

We appreciate your commendation of our study and concur that prospective, randomized advanced clinical studies encompassing a larger cohort from multiple centers will significantly enhance our understanding of pediatric cataract surgeries. The collaboration among various centers in future studies will undoubtedly provide more comprehensive insights and further elucidate the complexities associated with this intricate surgical domain.

Ethics

Authorship Contributions

Surgical and Medical Practices: E.Ç., Concept: V.D., M.O.S., E.B.V., E.Ç., Design: V.D., M.O.S., E.B.V., E.Ç., Data Collection or Processing: V.D., E.B.V., Analysis or Interpretation: V.D., M.O.S., E.Ç., Literature Search: V.D., E.B.V., Writing: V.D.

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References

1. Dericioğlu V, Sevik MO, Bağatur Vurgun E, Çerman E. Predictive Factors of Complications and Visual Outcomes after Pediatric Cataract Surgery: A Single Referral Center Study from Türkiye. *Turk J Ophthalmol.* 2023;53:267-274.
2. Ucar F. Intraocular lens implantation with flattened flanged intrascleral fixation technique in pediatric aphakia. *J AAPOS.* 2022;26:8.e1-8.e7.