Use of Scleral IOL Fixation or CTR in Children with Ectopia Lentis

The recent article by Zetterström and coauthors1 confirms 2 earlier reports2,3 that scleral fixation of a posterior chamber intraocular lens (IOL) is safe and effective in children with ectopia lentis. The authors describe anterior subluxation and pupillary capture of the IOL optic in 2 eyes and state that this complication has not been reported. We reported our results of scleral-fixed IOLs in 6 eyes of 3 children and described the same complication.2 It is possible that our report is not mentioned because of an overlap in manuscript processing times. Interestingly, we used the same IOL (Alcon model CZ70BD) in our patients. We agree with the authors that a larger pupillary diameter in children could have predisposed to IOL capture, although it is not clear why the problem did not occur more frequently. In all 5 eyes with this complication, it is encouraging that the pupillary capture was reversed with nonsurgical means.

The authors do not mention the time of occurrence of IOL capture in their patients. In our cases, the complication occurred after 6 weeks in 2 eyes and after 12 months in 1 eye. They were all asymptomatic. It is important to warn parents of this potential complication since their early recognition would be helpful. We recommend a regular follow-up of children in whom this lens style is used.

The capsular tension ring (CTR) has been used successfully not just in cataract with extensive zonular dialysis, but also in other conditions such as ectopia lentis and microspherophakia in which the zonules are weak or broken.4–6 In severe cases of ectopia lentis, the insertion of a CTR will improve the situation, but not to an adequate extent for good IOL centration. A new CTR designed for scleral fixation has been tried with encouraging outcomes.7 If it is not available, suturing the CTR to the sclera can be considered. Osher and others have done this with good success (R.H. Osher, MD, “Synthetic Zonula Offers Hope in Tough Cataract Cases,” Ophthalmology Times, October 15, 1997, page 22). We have also used scleral fixation of the CTR, placed within the capsular bag, to achieve good capsular bag centration in children with severe ectopia lentis. The IOL is then implanted within the capsular bag (unpublished data). The use of a CTR in children with conditions of ectopia lentis and microspherophakia can be considered in selected cases, as this has the advantage of keeping the posterior capsule and vitreous intact.

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References

Reply: We thank Lam and coauthors for the valuable comments about our paper. It was, as suggested, an overlap in the processing time that prevented our mentioning their results in our article.

We agree it is significant that pupillary capture of the IOL occurred with Alcon model CZ70BD. In our study, the Pharmacia & Upjohn model 722Y was implanted in some eyes, and this complication was not found in them. It is probably a matter of design.

The primary aim of our study was to show that it is safe to suture IOLs in children. Today, as we all know, there are many other surgical ways to keep the capsular bag in place in cases with loose zonules.—Charlotta Zetterström, MD, PhD