IOL Use in Children With Uveitis-Related Cataract

To the Editor:

We congratulate Paikos et al on the excellent results in their series of nine children undergoing cataract extraction for uveitis-related lens changes in their article "Cataract Surgery in Children With Uveitis" (J Pediatr Ophthalmol Strabismus. 2001;38:16-20). The authors performed lensectomy and anterior vitrectomy using a limbus-based approach in nine eyes, seven of which had cataract secondary to juvenile rheumatoid arthritis. Postoperatively, the children were prescribed contact lenses for the ametropia. Only two children in this series were <5 years. Contact lens usage in very young children often is difficult.

Recent advances in our understanding of the mechanics of cataract surgery in the pediatric eye along with improvements in instrumentation and surgical technique have combined to make cataract surgery with intraocular lens (IOL) implantation an accepted procedure in children aged >2 years. However, although several studies have proved the efficacy of IOL implantation after cataract surgery in adults with uveitis, there is still a reluctance to perform a similar procedure in children with uveitis. It is generally believed that cataract surgery in children with uveitis will lead to a reactivation of the inflammation, and IOL implantation may worsen this phenomenon.

Because we believe it is important to restore visual function quickly in these young eyes with amblyogenic risks, we questioned the rationale of the above belief. As Paikos et al have shown in their study, cataract surgery can be performed safely in such eyes, provided proper anti-inflammatory cover is provided in the peri- and postoperative period. The placement of an IOL securely within the capsular bag protects it from the inflamed uveal tissue in these eyes. Recent IOL options such as heparin-surface modified lenses and acrylic IOLs further increase the biocompatibility of these devices. Additional options currently available include the use of heparin in the irrigating solution, which helps decrease inflammation in the early postoperative period. With such options, IOL implantation should be possible in children with uveitis, as shown in recent studies.

Although children with juvenile rheumatoid arthritis are reported to have worse outcomes after IOL implantation, a review of the published data seems to indicate that these eyes have suboptimal outcomes because of a number of factors—earlier age of onset of uveitis and cataract leading to amblyopia, recurrent episodes of inflammation in the postoperative period, and other complications that affect vision including severe band keratopathy and glaucoma—all of which are unrelated to the IOL.

As Paikos et al reported, relapses of uveitic implantation occurred in their patients (severe in 2 cases), despite not implanting an IOL. In another series, postoperative outcomes in juvenile rheumatoid arthritis were actually better after IOL implantation than after lensectomy, partly because poor contact lens tolerance in the latter group worsened the amblyopia. In a study by Lundvall and Zetterstrom, glaucoma developed in 3 of 10 eyes with juvenile rheumatoid arthritis-uveitis prior to cataract surgery.

Thus, it appears that postoperative inflammation is related to the preexisting uveitic process in the eye. We believe if this process is optimally tackled, the use of an IOL could be relatively safe in children with uveitis-related cataract.

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References

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infection of the fetus may occur with absence of clinical features or complications of the infection at birth. Reactivation of the virus during childhood may then produce herpes zoster as the first manifestation of clinical varicella-zoster infection.

REFERENCES


We agree that children with juvenile rheumatoid arthritis have suboptimal outcomes due to a number of factors unrelated to IOL use (e.g., earlier age of onset, recurrent inflammation, and glaucoma). However, IOL placement does increase the incidence of postoperative complications such as dense secondary retrolental membranes, fibrosis, and lens capture. A "simple" posterior capsulotomy and anterior vitrectomy cannot prevent development of such membranes. Careful removal of lens and capsular fragments and a wide anterior vitrectomy are more efficient in providing a permanent clear visual axis, which is most important during these critical ages for developing amblyopia.

Early cataract surgery, intensive pre- and postoperative control of uveitic inflammation, and aggressive treatment of amblyopia are the most critical factors for a successful outcome. The risk of IOL placement in these children, especially in children with juvenile rheumatoid arthritis-associated uveitis, must be carefully weighed against the risk of possible intolerance of contact lenses used for the correction of aphakia.

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