

Comparison of the rate of refractive growth in aphakic eyes versus pseudophakic eyes in the Infant Aphakia Treatment Study.

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Abstract

PURPOSE:

To compare the rate of refractive growth (RRG) between aphakic eyes and pseudophakic eyes in the Infant Aphakia Treatment Study (IATS).

SETTING:

Twelve clinical sites across the United States.

DESIGN:

Randomized clinical trial.

METHODS:

Patients randomized to unilateral cataract extraction with contact lens correction versus intraocular lens (IOL) implantation in the IATS had their rate of refractive growth (RRG3) calculated based on the change in refraction from the 1-month postoperative examination to age 5 years. The RRG3 is a logarithmic formula designed to calculate the RRG in children. Two-group t tests were used to compare the mean refractive growth between the contact lens group and IOL group and outcomes based on age at surgery and visual acuity.

RESULTS:

Longitudinal refractive data were studied for 108 of 114 patients enrolled in the IATS (contact lens group, n = 54; IOL group, n = 54). The mean RRG3 was similar in the contact lens group (-18.0 diopter [D] ± 11.0 [SD]) and the IOL group (-19.0 ± 9.0 D) (P = .49). The RRG3 value was not correlated with age at cataract surgery, glaucoma status, or visual outcome in the IOL group. In the aphakia group, only visual outcome was correlated with refractive growth (P = .01).

CONCLUSIONS:

Infants' eyes had a similar rate of refractive growth after unilateral cataract surgery whether or not an IOL was implanted. A worse visual outcome was associated with a higher RRG in aphakic, but not pseudophakic, eyes.

FINANCIAL DISCLOSURE:

None of the authors has a financial or proprietary interest in any material or method mentioned.