

Anisometropia at Age 5 Years After Unilateral Intraocular Lens Implantation During Infancy in the Infant Aphakia Treatment Study.

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Abstract

PURPOSE:

To report the prevalence of anisometropia at age 5 years after unilateral intraocular lens (IOL) implantation in infants.

DESIGN:

Prospective randomized clinical trial.

METHODS:

Fifty-seven infants in the Infant Aphakia Treatment Study (IATS) with a unilateral cataract were randomized to IOL implantation with an initial targeted postoperative refractive error of either +8 diopters (D) (infants 28 to <48 days of age) or +6 D (infants 48-210 days of age). Anisometropia was calculated at age 5 years. Six patients were excluded from the analyses.

RESULTS:

Median age at cataract surgery was 2.2 months (interquartile range [IQR], 1.2, 3.5 months). The mean age at the age 5 years follow-up visit was 5.0 ± 0.1 years (range, 4.9-5.4 years). The median refractive error at the age 5 years visit of the treated eyes was -2.25 D (IQR -5.13, +0.88 D) and of the fellow eyes +1.50 D (IQR +0.88, +2.25). Median anisometropia was -3.50 D (IQR -8.25, -0.88 D); range -19.63 to +2.75 D. Patients with glaucoma in the treated eye (n = 9) had greater anisometropia (glaucoma, median -8.25 D; IQR -11.38, -5.25 D vs no glaucoma median -2.75; IQR -6.38, -0.75 D; P = .005).

CONCLUSIONS:

The majority of pseudophakic eyes had significant anisometropia at age 5 years. Anisometropia was greater in patients that developed glaucoma. Variability in eye growth and myopic shift continue to make refractive outcomes challenging for IOL implantation during infancy.