Infant Aphakia Treatment Study (IATS) – 2014

Objective

To compare visual outcomes in infants with a unilateral congenital cataract following cataract extraction surgery based on whether they were treated with intraocular lens (IOL) implantation or a contact lens.

Methods

Design: Prospective RCT

Sample Size: 114

Treatment Groups:
- Aphakic contact lens (n = 57)
- IOL (n = 57)

All patients received the same patching therapy and follow-up.

Outcome Measures:
- Visual Acuity (VA)
- Proportion of Intraoperative Complications
- Proportion Adverse Events of visual field loss
- Adherence to Patching Therapy

Results

Point 1: The visual acuity was not different between the 2 treatment groups (logMAR = 0.90 [20/159] for both groups)
- However, more than 2x as many contact lens-treated eyes (n=13) had VA greater than or equal to 20/32 compared to the IOL-treated eyes (n=6)

Point 2: The proportion of adverse events was higher in the IOL group (81%) than contact lens (56%) group.
- Common events: lens proliferation, pupillary membranes, corectopia

Point 3: The proportion of additional intraoperative procedures was higher in the IOL group (72%) than the contact lens (12%) group.
- Common procedures: clearing visual axis opacities, glaucoma surgeries

Point 4: The percentage of participants included in the adherence analyses did not differ by treatment group.
- Successful adherence to patching was defined as a mean proportion of patching at least 75% of the prescribed time within five 12-month periods

TLDR: When operating on an infant (1-6 months old) with a unilateral cataract, leaving the eye aphakic (and using a contact lens) may be preferred to primary IOL implantation.

The Infant Aphakia Treatment Study Group. Comparison of Contact Lens and Intraocular Lens Correction of Monocular Aphakia During Infancy: A Randomized Clinical Trial of HOTV Optotype Acuity at Age 4.5 Years and Clinical Findings at Age 5 Years. *JAMA Ophthalmol*. 2014;132(6):676–682