Solebo and Rahi response to Correspondents:

The suggestion by the correspondents that IoLunder2, one of the largest overall prospective congenital cataract inception cohorts, is insufficiently powered to report on glaucoma in unilateral cataract is challenged by striking similarities to the Infant Aphakia Treatment Study (IATS) RCT. This lends credence to our finding of lack of protective effect of IoLs, as well as the overall robustness of IoLunder2.

The correspondents’ univariate re-analysis of our raw data on glaucoma outcome, without adjusting for the undisputed key confounding factor – age at surgery - is simply inappropriate. They cite a systematic review which was derived from largely retrospective studies, failed to analyse separately bilateral and unilateral surgery outcomes, and was unable to adjust for the confounding variable of ocular size: smaller eyes have a higher risk of glaucoma, and are less likely to undergo IoL implantation. Its relevance is questionable.

A recent RCT cited as evidence of absence of association between IoLs and reoperation risk had significantly higher complications overall in the IoL group versus the aphakic group: specifically posterior synechiae in 28% of IoL children versus 8% aphakes. This structural inflammatory sequelae is usually an uncommon event, and importantly is a key predictor of subsequent glaucoma.

The details sought about ‘Intensive regimens’ of topical steroids (at least 2 hourly for the first week) were described within supplementary tables. We reiterate IoLs increase the risk of re-operation irrespective of steroid use.

Correspondents also ask why we have corrected visual outcome by age at visual assessment: it seems they misread that the variable of interest was age at surgery. Their unevidenced comment that concordance with occlusion is easier to achieve in children with IoLs contradicts the evidence from IATS.
The technique of optic capture implantation (suggested as holding promise of improved results) has yet to be adopted by other groups and lacks evidence on reproducibility, 12 years since it was described. In any case, our findings regarding IOI implantation as routinely practised hold true. Finally, it is inappropriate to equate primary IOI implantation and subsequent reoperation with initial aphakia and secondary implantation. Re-operation following primary IOIs causes repeated exposure to general anaesthetic within a year of primary surgery, ie at a young age (under 3 years old). It is this exposure which is the concern, not second surgery per se. This was entirely clear in our paper.

A one-step solution is an attractive option in resource poor countries. Our findings and those of IATS show children often require additional optical interventions following primary IOIs. We believe all children should have care informed by robust evidence. In choosing to use IOIs in infants and young children, ophthalmologists should be aware of the need for follow up and counsel parents accordingly.

1. Mataftsi et al correspondence to LCAH
3. Hildebrand et al correspondence to LCAH
6. Solebo AL, Cumberland P, Rahi JS. 5-year outcomes after primary intraocular lens implantation in children aged 2 years or younger with congenital or infantile cataract:
