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Sir,
Comment on 'Visual acuity and its predictors after surgery for bilateral cataracts in children'

We read with great interest the recent article by Bonaparte *et al*[1] regarding the visual acuity and its predictors after surgery for bilateral cataracts in children. We would like to make the following comments on this article.

The mainstream study supported that timely cataract surgery in infants decreases the risk of developing resistance to amblyopia treatment and increases optimal potential visual functions. However, Bonaparte proposed that age <1 year at the time of cataract extraction was associated with poor postoperative visual acuity. Several reasons may account for this discrepancy. First, the majority of the patients having cataract extraction <1 year are more likely to have severe cataract types (for example, total cataract, diffuse cataract). These types of cataract occur during infancy, which is the sensitive and critical stage in visual development causing high risk of amblyopia.[2] Therefore, the types of cataract instead of the surgical timing might be the underlying mechanism for the poorer vision among individuals who underwent cataract extraction at age <1 year. Meanwhile, recent studies have demonstrated that early cataract surgery is associated with high risk of secondary glaucoma and severe posterior capsular opacification.[3] These potential postoperative factors might be another important reason for the poor vision among patients with early cataract surgery.

This study also reported that absence of primary IOL placement is associated with poor postoperative visual acuity. We suggest that these results should be interpreted cautiously. Children born with visually significant cataract tend to have earlier surgery, leading absence of primary IOL placement because of their overall less developed eyes. The aphakic infants will suffer from higher risk of secondary glaucoma, causing poorer vision.[4] The patients with developmental cataracts will have later surgery with primary IOL placement. It would be better to put the type of cataract, surgical timing, and IOL implantation together to see their interrelationship with long-term visual acuity. We presume that the occurrence of primary IOL implantation is highly correlated with the surgical timing and thus will affect the visual prognosis.

We sincerely appreciate Bonaparte and colleagues for their remarkable contributions to the study of preoperative predictors for pediatric cataracts. However, the conclusion might be more powerful and valuable for uncovering the underlying relationship between related factors and visual acuity if the study could further consider the types of cataract and postoperative factors.

Conflict of interest

The authors declare no conflict of interest.

Author contributions

Erping Long wrote and revised the manuscript; Peixing Wan and Yehong Zhuo revised and approved the manuscript; and Yehong Zhuo is the manuscript's guarantor. The authors affirm that the manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

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Sir,
Reply to: 'Comment on Visual acuity and its predictors after surgery for bilateral cataracts in children'

We would like to thank Long and colleagues for their comments on our paper, 'Visual acuity and its predictors after surgery for bilateral cataracts in children.'[1] In our study, surgery at <1 year of age yielded poorer visual outcome in eyes operated for cataract surgery in both eyes. In addition to type of cataract and surgical timing, location of opacity in the lens is an important factor influencing visual outcome. Even during the first few months of age, a cataract located anteriorly is less amylogenic as compared with a cataract located posteriorly. We agree with Long and colleagues that children who undergo cataract surgery at an earlier age are at a high risk for secondary glaucoma and severe posterior capsule opacification (PCO). With that said, in our series, glaucoma can be a reason for poor visual outcome. However, we typically remove visually significant PCO as soon as it is detected and we follow our surgery patients very closely during the early postoperative period. So, PCO would be less likely to be a reason for poor visual outcome.

In our study, multivariate analysis of factors associated with poor acuity as dichotomous outcome revealed that absence of primary IOL placement is associated with poor postoperative visual outcome. As stated in the

manuscript, our study was retrospective and non-randomized, the absence of a primary IOL implantation at the initial surgery may be a marker for microphthalmia or an overall less developed eye. Thus, the poorer visual outcome may not be related to the aphakia itself, but to the type of eyes left aphakic.[1] The aphakic infants will suffer from the higher risk of secondary glaucoma but this is attributed to selection bias. We have reported that patients undergoing cataract surgery at an early age are at a high risk for the development of glaucoma with or without an IOL implant.[2] Five-year results of the IATS study concluded that younger age at surgery increased the risk for developing glaucoma but the risk was not altered by the choice of aphakia or IOL implantation.[3]

Finally, being a retrospective study, it was difficult to put type of cataract as a predictor. As the purpose of our study was to evaluate preoperative factors influencing visual outcome, we did not include postoperative glaucoma as one of the variables in the model.[1]

Conflict of interest

The authors declare no conflict of interest.

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Sir,
Treatment patterns of ranibizumab intravitreal injection and dexamethasone intravitreal implant for retinal vein occlusion in the USA

The article by Nghiem-Buffet *et al*[1] evaluated ophthalmology and treatment visits for ranibizumab (Lucentis; Genentech, Inc., South San Francisco, CA, USA) and dexamethasone (Ozurdex; Allergan, Irvine, CA, USA) in treating naive patients with macular oedema (MO) secondary to retinal vein occlusion in the routine clinical practice in the USA using US patient-level medical claims data.

We would like to address the great discrepancy compared to the current standards regarding the number of treatment visits with ranibizumab and dexamethasone in patients with MO resulting from central retinal vein occlusion (CRVO). A number of 4.1 ranibizumab injections and 1.8 dexamethasone implant injections within a period of 12 months represents approximately half of the standard claimed by the pivotal studies and the current recommendations, and indicates that patients have been insufficiently treated. Thus, the standard injection scheme during the first year of intravitreal ranibizumab therapy for MO owing to CRVO was clearly set by the level 1 evidence of the Cruise study,[2] that is, ranibizumab should be given monthly for the first 6 months, with a subsequent 6-months dosing, as required. The current valid recommendations[3] consider that the duration of $\geq$3-line improvement after dexamethasone implant is typically 2–3 months and that the reinjections generally will be performed after 4–5 months. Similarly, the study by Callanan *et al*[4] demonstrated that treatment with dexamethasone implant every 5 months improved the final outcomes in patients with diabetic MO and met the *a priori* criteria for noninferiority to ranibizumab in average change from baseline visual acuity over 12 months. Noninferiority was achieved with an average of 2.85 dexamethasone implant injections and 8.70 ranibizumab injections.

Altogether, regardless of the intravitreal pharmacotherapy chosen, for example, specific (ranibizumab) or nonspecific (dexamethasone implant) anti-vascular endothelial growth factor (VEGF) agents, the efficacy of treatment depends primarily on the precociousness of the therapy after CRVO onset. Therefore, therapy with anti-angiogenic agents has to be promptly applied as soon as possible after the CRVO onset. Every delay of therapy adversely influences the deterioration of visual functions, which is difficult to restore even with subsequent treatment.[5] Both groups of anti-VEGF substances provide similar rates of vision improvement but with superior anatomic outcomes and fewer injections in the dexamethasone implant-treated eyes. However, more patients receiving the dexamethasone implant lose vision mainly due to cataract.

Conflict of interest

The authors declare no conflict of interest.

Author contributions

Both authors (DC and MC) were involved in design and conduct of the study; collection, management, analysis and interpretation of the data; and preparation, review or approval of the manuscript.

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