Author's response to reviews

Title: Spectral Domain Optical Coherence Tomography in Children: Normative Data and Biometric Correlations

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Author's response to reviews:

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Dr Emilie Aime
Executive Editor
BioMed Central

Dear Dr Aime,

We are pleased that our submission “Spectral Domain Optical Coherence Tomography in Children: Normative Data and Biometric Correlations” is of interest to BioMed Central Ophthalmology. We thank the reviewers for their thorough review and valuable comments. We agree with most of them and below are our point-by point responses:

Referee 1:

1. Abstract: results were modified to mention correlation of central macular thickness with gender.

2. Introduction: all papers reporting normative SD-OCT values in children were referenced.

3. Methods: children 7 years and above provided assent, section corrected.

4. We agree with the reviewer; our subjects were recruited from a hospital setting and not from a community population. This was well acknowledged in our discussion section: “We also excluded patients with high refractive errors and
increased cup to disc ratios; normative data for these groups were not established. Additionally, our study population was hospital and not community based. However, patients in this setting received a comprehensive exam, and biometric data were recorded." Refractive errors were carefully reported and correlation analysis was performed to control for this possible confounder. For the same reason, we did not include subjects with high refractive errors (> 7 diopters of spherical equivalence). Moreover, we excluded subjects with intraocular pathology including glaucoma and any amblyogenic factors as changes in OCT parameters have been associated with amblyopia. Although this does restrict the population studied, it does help in recording a true normative database for a truly healthy group of children. In addition a number of valuable published studies on the same topic were similarly institutional in design.

5. Our population consisted of white Middle Eastern children, this was mentioned as a limitation in the discussion: “Limitations of this work include the mostly uniform ethnic group (white and Middle Eastern) so the effect of race and ethnicity could not be tested.” The conclusion was modified to mention that children of other races and ethnicity should be studied.

6. Ranges for SE and AL were added in the abstract and results section as requested.

7. Thank you for the comment; the results section was changed to explain the subgroups better:” 6 up to 9 years of age (n=35), 9 up to 12 years (n=28), 12 up to 15 years (n=28) and 15 up to 18 years (n=17)”. This was also reflected in the tables 1 & 2.

8. The discussion and results sections were modified to agree better. Sentences were also changed to be more specific and clear for the biometric correlations.

9. Discussion section was modified to conform better with results.

10. Detailed comparison with the paper of Barrio-Barrio was added to the discussion.

11. Management of children with poor fixation was deleted from the methods section.

13. Decimals were removed from the x-axis as requested.

14. References were corrected as requested.

Referee 2:

1. Correction applied.

2. Statement was added to results section in abstract.

3. This group of children were referred because of failed school screening, visual behavior abnormalities noted by parents, positive family history of refractive
errors, or referral from the pediatrician. This was added to the methods section.

4. Methods section: SD-OCT imaging: referral to ETDRS areas A1-9 was made.

5. Multiple measurements were taken and the best centered one with good signal strength was chosen for analysis. This was added to the methods section.

6. The paired t-test was used to compare the macular thicknesses. This was added to the methods section.

7. Abbreviation was replaced by the full wording

8. Correction applied.

9. Phrase was omitted.

10. Correction applied.

11. Added unit and % in figure

12. Decimal removed from figure

13. Table 4 & 5: the first column refers to the type of OCT device used (time domain or spectral domain), hence the shading of the rows was unnecessary and was removed.

For your convenience, in addition to the revised manuscript, a copy with the above changes tracked was uploaded under additional materials.

We have no acknowledgements to make, the authors listed were responsible for the conduct of the study, data collection and drafting the final manuscript as well as the statistical analysis. This study received no funding, publication expenses will be covered by the ophthalmology departmental fund. The authors have no financial interests or any conflict of interest to disclose.

We hope our revised manuscript better meets your expectations. We are ready for any further modifications if required.

Thank you for your interest in our work. We look forward to hearing from you soon.

Sincerely,

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