

Comment on anisometropia magnitude and visual deficits in previously untreated anisometric amblyopia

Sumita Sethi, Keerti Munday, Mridu Chaudhary

Department of Ophthalmology, BPS Government Medical College for Women, Khanpur, Sonapat, Haryana 131305, India

Correspondence to: Sumita Sethi. Department of Ophthalmology, BPS Government Medical College for Women, Khanpur, Sonapat, Haryana 131305, India. sumitadrss@rediffmail.com

Received: 2013-12-26 Accepted: 2014-06-05

DOI:10.3980/j.issn.2222-3959.2014.06.31

Sethi S, Munday K, Chaudhary M. Comment on anisometropia magnitude and visual deficits in previously untreated anisometric amblyopia. *Int J Ophthalmol* 2014;7(6):1071

Dear Editor,

We read with great interest article titled "Anisometropia magnitude and visual deficits in previously untreated anisometric amblyopia" by Chen *et al*^[1].

The authors have analysed subjects with previously untreated anisometric amblyopia and found a significant correlation between high degree of anisometropia and deep amblyopia, worse contrast sensitivity, fusion and stereopsis functions.

We commend the authors in addressing a very important problem and agree with the authors in the notation that children with anisometropia are usually detected later owing to lack of noticeable physical abnormalities.

We would like to share our experience with the stereopsis status post-treatment in children with pure anisometropia (without strabismus)^[2]. Anisometric children in the age group of 6-18y (either with no amblyopia or following treatment of amblyopia in the form of glasses with or without occlusion; after the vision equalised in both the eyes) were subjected to stereoacuity testing on Titmus fly stereogram under standard conditions. We established a quantitative relationship between stereoacuity and anisometropia and observed that children with anisometropia had a

compromised stereoacuity when compared with age matched controls.

It is an interesting outcome of our study that children with anisometropia post-treatment were able to attain normal visual acuity but not able to retain normal stereoacuity. We thus concluded that monocular blur is more detrimental for the development of stereoacuity rather than for development of good visual acuity.

We are further in the process of analysing more number of subjects in our series and to establish a definitive relationship between the type and severity of anisometropia and their stereopsis status.

The authors have compared their results with study by Levi's *et al*^[3], and mentioned that Levi's anisometric amblyopes' binocular vision would have had better stereopsis because treatment of amblyopia in early childhood could have played a significant role in development and reconstruction of binocular vision. We however had conflicting results in the matter that even post treatment though the subjects were able to regain normal vision they could not gain normal stereopsis.

We thus concluded that blurred vision in one eye in early life may incite a particular pattern of visual loss and even small differences in refractive error between the two eyes are capable of influencing the visual function.

ACKNOWLEDGEMENTS

Conflicts of Interest: Sethi S, None; Munday K, None; Chaudhary M, None.

REFERENCES

- 1 Chen BB, Song FW, Sun ZH, Yang Y. Anisometropia magnitude and visual deficits in previously untreated anisometric amblyopia. *Int J Ophthalmol* 2013;6(5):606-610
- 2 Sethi S, Munday K, Gupta N, Chaudhry M. Relationship between Anisometropia and Stereoacuity in school aged children of rural India. Poster presented at: The 9th International Symposium of Ophthalmology; 2013 November 9-11; Guangzhou, China
- 3 Levi DM, McKee SP, Movshon JA. Visual deficits in anisometropia. *Vision Res* 2011;51(1):48-57