Effect of discontinuation of orthokeratology lens wear on axial elongation in children – DOEE-1

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Purpose: To investigate the effect of discontinuation of orthokeratology (ortho-k) treatment on eyeball elongation in children who had completed a 2-yr myopic control study.

Methods: Three groups of subjects were recruited: Spectacle-wearing and ortho-k subjects who continued with their respective treatments for the duration of the project, and ortho-k subjects who stopped lens wear for 6 months and then resumed ortho-k lens wear for another 6 months, with about 1 month stabilization period between changes in treatment. Axial length was measured using the IOLMaster.

Results: Axial length elongated faster (p=0.003) in the first 6 months when lens wear was terminated, after the 2-yr myopic control study, compared to the other two groups of subjects. However, when controlled for age and initial axial length, no difference between groups was found (ANCOVA; p>0.05).

Conclusion: Increase in axial length after ceasing ortho-k lens wear was not significant if controlled for age and initial axial length.

Results have been presented at EurOK (European Section of the International Academy of Orthokeratology) in Budapest in July 2015.