

NCC 'FUTURE GENERATION 2024' PAPER Abstracts
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PAPER Abstracts

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Three-year myopia management efficacy of extended depth of focus soft contact lenses (MYLO) in Caucasian children

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Purpose: To evaluate the progression of myopia as assessed by change in axial length (AL) and spherical equivalent (SE) from baseline in Caucasian children wearing extended depth of focus soft contact lenses (CL) compared to distance single-vision spectacles.

Method: Longitudinal prospective non-randomized clinical trial. 98 children (6-13 years old) with SE ranging from -0.75 to -10.00D were recruited. 47 were fitted with CL (MYLO, mark'envoy, Spain), whereas 51 wore spectacles. Cycloplegic refraction was measured with an auto-refractometer (Topcon TRK-2P, Japan) and AL with an IOLMaster-700 (Zeiss, Germany) at 6-month intervals. Subjective responses after 1 month of CL wear related to vision and comfort were determined using a questionnaire with a scale from 1 (very poor) to 10 (excellent). High-contrast visual acuity (HCVA) and Contrast sensitivity (CS) were evaluated at baseline, 12, 24 and 36 months. The SPSS 28 software (SPSS Inc, USA) was used to analyze the data. The normality of the variables was verified with the Kolmogorov-Smirnov test. Measured repeated ANOVA was performed to compare the obtained results at different times. Student's t test was used for normal samples or the Wilcoxon test

otherwise. The significance level was set at 0.05.

Results: After 3 years, mean change in SE/AL in the CL group was -0.90±0.35D/0.55±0.06mm and -1.64±0.25D/0.97±0.06mm in the spectacle group (p<0.001). Cumulative absolute reduction in axial elongation (CARE) was 0.42±0.02mm. Difference in SE change was -0.74±0.13D. All questionnaire items showed a mean value ≥9. A reduction lower than 1 logMAR line in HCVA was found in the CL group compared with the spectacles group (p<0.001).

Conclusions: MYLO CL wear reduces myopia progression assessed as axial elongation and spherical equivalent compared to distance single-vision spectacles.

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