

Amblyopia, amblyogenic factors and axial Length of the eye are not associated to unilateral congenital nasolacrimal duct obstruction

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Background/ Aims: To evaluate the refractive status, axial length and prevalence of amblyopia among Saudi children with unilateral congenital nasolacrimal duct obstruction (UCNLDO) compared to the unaffected fellow eye.

Methods: A retrospective chart review was performed for children with UCNLDO at two eye institutes in Eastern Saudi Arabia from 2009 to 2015. The outcomes of syringing determined UNCLDO. Amblyopia was defined as anisometropia (spherical or cylindrical) >1.5 D, hyperopia > 3.5 D in any meridian, myopia > 3.0 D in any meridian, astigmatism > 1.5 D at 90° or 180°, >1.0 D at an oblique axis (more than 10° from 90° or 180°), any manifest strabismus, any media opacity >1 mm or ptosis 1 mm or less margin reflex distance 1 (MRD1). Matched pair analysis was performed to correlate variables. $P < 0.05$ was statistically significant.

Results: We included 39 children with UNCLDO. The mean axial length was 21.4 ± 1.3 mm for the eyes with UCNLDO and 21.6 ± 1.0 mm for the fellow eye ($P = 0.4$). Hyperopia greater than +2 D was present in 17 (44%) eyes with UCNLDO and none of the fellow eyes. None of the participants had strabismus.

Conclusion: Axial length, amblyopia, anisometropia, hyperopia and strabismus were not different in eyes with and without UCNLDO. UCNLDO is likely an isolated defect.

Keywords: Congenital anomalies, congenital nasolacrimal duct obstruction, amblyopia, anisometropia, refractive error, childhood blindness.