

Copy Effect Myopic Anisometropia in a Pair of Monozygotic Twins: A Case Report

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Abstract : Introduction: This case report aims to report myopic anisometropia with copy-image in monozygotic twins. Methods: In February 2021, a 6-year-old identical twin was seen, who was referred to us with the diagnosis of amblyopia in their left eye from an external center. Both twins had a full ophthalmic examination, which included visual acuity testing, ocular motility testing, cycloplegic refraction, and fundus examination. Results: On examination, "copy image" myopic anisometropia was discovered. Twin 1 had anisometropia with myopic astigmatism in the left eye. His cycloplegic refraction was +1.00 (-0.75x 75) in the right eye and -8.0 (-1.50x175) in the left eye. Similarly, twin 2 had anisometropia with myopic astigmatism in the left eye. His cycloplegic refraction was -7.75 (-1.50x180) in the left eye and +1.25 (-0.75x90) in the right eye. The best-corrected visual acuity was 20/60 in the amblyopic eyes and 20/20 in the unaffected eyes. There was no ocular deviation. In either patient, a slit-lamp microscopic examination revealed no abnormalities in the anterior parts of either eye. Fundoscopic examination revealed no abnormalities. No abnormal ocular movements were demonstrated. Conclusion: As far as we have reviewed in the literature, previous studies with twins were mostly concerned with mirror-effect myopic anisometropia and myopic anisometropia, whereas ipsilateral amblyopia and anisometropia were not reported in monozygotic twins. This case underscores the possible genetic basis of myopic anisometropia.

Keywords : amblyopia, anisometropia, myopia, twins

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