

R1 R2 R3 PG0 PG1 Estagiário Tecnólogo
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Service (sector) Electrophysiology N° CEP

Grating Acuity Deficit and Amblyopia Measured by Sweep-VEP in Children Treated for Congenital Cataract Fábio Ejzenbaum, Solange R. Salomão, Márcia B. Tartarella, Adriana Berezovsky, Paula Yuri Sacai

Purpose: The purpose of this study was to evaluate specifically the maculo-occipital pathway in infants treated for congenital cataract. Sweep-VEP interocular acuity differences (amblyopia) and deficits from mean normal were determined, considering the age at surgery. **Methods:** Sweep-VEP acuity was evaluated in a group of 13 children (5 unilateral and 8 bilateral cases) who were treated for congenital cataract. Unilateral cases had VA measured at 6-35 months of age (mean=20,6±10,7) and the cataract removed between 5 and 15 months of age (mean=10,6±4,0). Out of these 5 patients, 3 were wearing spectacle correction and 2 had intraocular lenses implant (IOL). Bilateral cases had VA measured at 7-80 months of age (mean=31,3±23,4) and the cataract removed between 1 and 22 months of age (mean=9,8±8,4). Out of these 8 patients, 7 were wearing spectacle correction and 1 had IOL.

Results: Mean VA deficit from mean normal was comparable between operated eyes with unilateral cataract (2,93 octaves) and bilateral cataracts (2,58 octaves). A significantly more severe amblyopia (IAD) was found in the unilateral (2,68 octaves) when compared to bilateral cases (0,40 octaves) by t-test (t=5,48; P<0,001). Cases treated with IOL had a trend to show lower VA deficits (1,88 octaves) when compared to those wearing glasses (2,90 octaves). No correlation was found between VA deficit and age at surgery.

Conclusions: A considerable VA deficit was found in this small cohort of children treated for either unilateral or bilateral cataracts. These results are consistent with the age of diagnosis and surgery that exceed the limits for a good visual development, showing VA deficits and amblyopia much higher than those described in the literature. There was a trend for less acuity deficit in patients who had IOL implant than those treated with glasses. Follow-up VA measurements are essential to better understand the visual development of these patients.

Supported by FAPESP 97/11493-3 to Solange R. Salomão