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Last Name - Moraes

First Name - Nilva

Middle - S.B.

Service (sector)

Retina and Vitreous

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Long-Term Cicatricial Outcome in the Retinopathy of Prematurity.

Author: Moraes, N.S.B.; Almeida, M.F.B.; Salomão, S.R.; Belfort Jr., R. Retina and Vitreous Section, Dept. of Ophthalmology, Federal Univ. of São Paulo.

Purpose: To determine the long-term outcome in preterm infants with retinopathy of prematurity (ROP).

Methods: Screening for ROP was performed in preterm infants born at the São Paulo Hospital from January 1989 to January 2000. Infants were examined at the 4th, 7th, 9th, 12th and 24th week of life by the same retina specialist (NSBM). Inclusion criteria were: gestational age (GA) < 37 weeks and/or birth weight (BW) < 1500g. Binocular indirect ophthalmoscopy was performed with a 28-diopter lens and lid speculum after complete pupil dilation (tropicamide 1% = phenylephrine 2,5%). Laser therapy or cry therapy was performed when necessary.

Results: During this 11-year period, 4852 preterm infants were examined and 1455 (30%) were found to have some degree of ROP. Treatment was required in 211/1455 infants (14.5%). Cry therapy was performed in 42 infants and laser therapy in 169. Of a total of 422 treated eyes, three had partial retinal detachment (ROP stage IV) and one had total detachment (ROP stage V). Macular ectopia with papillary dragging and attached retina was found in 12 eyes. Eyes treated with cry therapy showed consequent retinal pigment epithelium mobilization in the posterior pole. Retinal vascularization between laser scars was found in 26 eyes. Besides the ROP, 35% of the treated infants showed isotropia, 92% had myopia (-1.00 to -8.00 SD) and/or astigmatism (-1.00 to -4.50 CD). Visual acuity outcome ranged from 20/70 to 20/20 in the successfully treated and/or regressed cases.

Conclusion: In this long-term prospective study, ROP was found in 30% of preterm infants born with BW < 1500g and GA < 37 weeks. Vascular retinal ablation was needed in 14.5% of ROP cases. Laser therapy has provided better results than cry therapy, showing no retinal pigment epithelium mobilization and smaller amounts of myopia. Better visual acuity results were obtained in cases with immediate treatment.