( ) R1 ( ) R2 ( ) R3 (X) PG0 ( ) PG1 ( ) Estagiário ( ) Tecnólogo ( ) PIBIC Last Name - Moraes First Name - Nilva Middle - S. B.

Service (sector) Retina and Vitreous Nº CEP

Chronological versus post-conceptual age to determine timing of spontaneous regression of Retinopathy of Prematurity

Nilva S.B. Moraes, Solange R. Salomão, Rubens Belfort Jr

PURPOSE: To compare chronologial age with post-conceptual age to observe the spontaneous regression of Retinopathy of Prematurity (ROP) **DESIGN:** Cohort prospective study. **METHODS:** Preterm infants with birthweight (BW) <1500g and/or gestational age (GA) <32 weeks from January 2001 to December 2003 underwent ROP screening by binocular indirect ophthalmoscopy examination. The first exam was performed at 30 days of life and repetead each seven or fifteen days, until the spontaneous regression or progression of the disease was observed. We compared results of spontaneous regression of ROP with stages, zones, birth weight and gestational age. We considered spontaneous regression of the disease when temporal retinal vascularization was complete or nasally complete without temporal stage 2 ROP or regression of neovascularization (popcorn) without complete retinal vascularization. We used ANOVA and Scheffe tests for statististical analysis. **RESULTS:** 360 preterm infants < 1500 grams survived at least 30 days and 141 had ROP (39%). Out of the 141 ROP cases, 11 infants (9%) had to treat ROP with laser and 4 infants do not had follow up examinations. We examined 126 infants with ROP and followed until the disease was regressed. BW categories were: 500-749 g (N=9), 750–999 g (N=40), 1000–1249 g (N=43) and 1250-1500g (N=24). GA categories were: 24–25 weeks (N=5), 25-27 weeks (N=21), 28-31 weeks (N=84) and 32-34 weeks (N=17). All infants left neonatal intensive care unit after 67 days, in average. 70 preterm infants had ROP stage 1, 47 stage 2 and 9 stage 3 and 2 babies had ROP zone 1, 95 zone 2 and 29 zone 3. The average of chronological age (40.9 weeks) at the time of spontaneous regression was different considering stages, zones, BW and GA (p<0.0001). Spontaneous regression of ROP occurred between 45 and 122 days of life. The average of post-conceptual age (41,1 weeks) was different for stages (p<0.0009) and similar for zones (p=0.93), BW (p=13) and GA (p=0.12).
 CONCLUSIONS: This study shows regression of ROP in 90% of cases. Time of involution is better determined by post-conceptual age and occurred between 37 and 44 weeks, besides zone, BW or GA.