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Evaluation of the incidence of ROP in the maternity and hospital private network: Neonatal care could lead to the disappearance of this syndrome?

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Patient and Method: A cross-sectional, retrospective, analytical and observational study that seeks to correlate the presence of retinopathy of prematurity with the clinical conditions of prematurity and surgical-clinical interventions in premature babies born or followed up at the Unimed Hospital in Joinville, SC; During the period from November 2014 to April 2017. Preterm infants (gestational age ≤ 32 weeks and birth weight $\leq 1,600$ g) were included, who were hospitalized in the maternity hospital of the referred hospital, with an ophthalmologic examination performed at least once during the period of hospitalization; And registered in the data base Patient and Method: OPHTHALMOLOGICAL EVALUATION; With appropriately completed clinical evaluation charts. Patients who did not meet the criteria for inclusion and premature infants who died during the period of admission to the neonatal intensive care unit were excluded. For the statistical analysis, premature infants were divided into three groups: premature GI, with retinopathy of prematurity, treated with laser; preterm group GII, with ROP and spontaneous regression of retinopathy; GIII, premature infants who did not develop ROP. The ophthalmologic examination was always performed by the same ophthalmologist, respecting the criteria of the International Committees for classification and treatment of ROP. To evaluate the association between dichotomous variables, Fisher's exact test was considered. For the comparison between groups in relation to quantitative variables, the non-parametric Mann-Whitney test was considered. Values of $p < 0.05$ indicated statistical significance. The research was elaborated following Resolutions CNS 466; 2012.

Results: During the period 2014-2017, 157 premature infants were treated at the neonatal intensive care unit of the Hospital Center Unimed de Joinville-SC. Nineteen premature babies died in the neonatal ICU during this period. We excluded 111 premature infants; 81 for being above 1600g and above 32 weeks; 19 preterm infants above 1,600g and below 32 weeks and 11 preterm infants below 1,600g and above 32 weeks. Remaining 46 (29%) premature infants below or equal to 1,600g and 32 weeks, for the study. Of these ten (21%) premature infants developed ROP and of the preterm infants with ROP four (40%) needed laser treatment. The maximum and minimum age among treated preterm infants was 28 and 24 weeks and the maximum and minimum birth weight among treated infants was 990g and 590g, respectively. None developed stage above stage 3 plus. Among the preterm infants who developed some stage the maximum birth weight found was 1.030g. All preterm infants (100%) of the GI and GII groups required oxygen therapy through the orotracheal tube (TOT) as the first treatment. And in the GIII group, without ROP two preterm infants (5%) did not require oxygen therapy, 13(36%) required CPAP; 19 (40%) premature infants needed the TOT, for the initial oxygen treatment. Blood transfusion: in the GI group 75% performed the transfusion. In the GII group, 100% of the preterm infants performed. In group III, 48% of the preterm infants performed a blood transfusion. Alteration in the central nervous system (periventricular hemorrhage, leukomalacia or choroid plexus lesion) in GI, 50%; In GII, 50%; In GIII, 25%. Surgical interventions in the GI all performed laser during the neonatal ICU period and two (50%) performed other interventions (cardiac, inguinal hernia and tracheostomy). In GII, two (33%) underwent surgery (cardiac and herniorrhaphy). In the GIII group, six (17%) of the preterm infants underwent surgery. Infection in the GI, was present in 50%; In GII in 66% and in GIII in 31%; Staphylococci (epidermidis, haemolyticus or capitis) was the most commonly found bacterium. In GIII, 48% used surfactant, in GII and GI all used; As well as parenteral nutrition. In the GIII, only three premature infants did not receive parenteral feeding (minimum 3 days and maximum 23 days).

Conclusion: Analyzing the preliminary raised results, there is a tendency for ROP to appear in increasingly limited cases (< 1000 g of weight and < 29 weeks gestational age) and with high clinical complexity.

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