

## LEUKOCYTE ACTIVATION IN PRETERM NEWBORN INFANTS OF PREECLAMPTIC MOTHERS

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**Background:** There is scarce information on leukocyte activation in preterm newborns of preeclamptic mothers.

**Objective:** To study plasma IL-8 and GRO- $\alpha$  levels in preterm newborn infants of preeclamptic.

**Design/methods:** Newborn infants with gestational age < 36 weeks and birth weight < 2000 grams were included in the study, and divided in two groups: non-preeclamptic and preeclamptic groups. Exclusion criteria were: congenital malformations, and congenital infections. When blood sample was collected with laboratory exams in the first 48 hours of life, a small amount was used for IL-8 and GRO- $\alpha$  measurement. Method utilized was enzyme immunoassay.

**Results:** 119 preterm infants (64 non-preeclamptic and 55 preeclamptic) were included in the study. Both groups were similar in birth weight, gestational age, Apgar scores at 5 minutes, sepsis, mechanical ventilation, TPN, NEC, IVH and death. The non-preeclamptic group had more rupture of membranes for > 18 hours, vaginal delivery, maternal urinary tract infection and chorioamnionitis. The preeclamptic group had more RDS, neutropenia, low platelet count and SGA. IL-8 was higher in the non-preeclamptic group [259.6 pg/mL (86.4-261.3) and 81.9 pg/mL (3.6-87.2)  $p < 0.001$  in non-preeclamptic and preeclamptic groups, respectively]. GRO- $\alpha$  was similar in both groups [273.9 pg/mL(63.9-306.7) and 261 pg/mL (116.6-321.3)  $p=0.236$  in non-preeclamptic and preeclamptic groups, respectively]. After multiple regression analysis only absence of preeclampsia was associated with high IL-8 levels.

**Conclusions:** Preterm newborn infants of preeclamptic mothers have a decreased plasma level of IL-8. Our findings suggest that the leukocyte activation may be impaired in infants of preeclamptic mothers.