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**INFLAMMATORY MARKERS IN THE
DIAGNOSIS OF CONGENITAL INFECTION
IN PREMATURE NEWBORNS WITH LOW
BIRTH WEIGHT FROM MOTHERS WITH
PREMATURE RUPTURE OF MEMBRANES**

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Backgrounds: Congenital infections are the most common and, at the same time, one of the most serious issues in the perinatal period. The presence of prenatal risk factors often serves as a predictor of these conditions in premature newborns, leading to the search for optimal diagnostic methods for infectious and inflammatory processes in newborns.

Methods: The study included 49 premature newborns with low birth weight, born in the years 2022-23 and receiving treatment at the Neonatal Intensive Care Unit of the Research Center for Maternal and Child Health. The gestational age was 27(26 - 28) weeks. Body weight: 950(797-1185) grams. 42% of examined newborns' mothers had PROM (n = 21). The inflammatory markers IL-6, CRP, and ESR were investigated.

Results: In newborns with low birth weight, inflammatory markers IL-6 and CRP levels were higher in infants born to mothers with PROM on the 1st day ($p_1=0.050$, $p_2=0.049$). From 3-10th days, PCT levels were higher in infants born to mothers with PROM ($p_3=0.024$). There were significant differences in pro-inflammatory markers ($p_{IL-6}<0.0001$, $p_{CRP}=0.0143$, $p_{PCT}=0.0295$) on the 1st day between newborns with congenital infection (n=35) and those with RDS (n=14). From 3-10th days, significant differences were found in CRP2 and PCT3 levels ($p_2=0.0004$, $p_3=0.0001$). IL-6 was the best marker for early prediction with an AUC of 0.949 (Se 77.1%, Sp 98.9%), cut off = 127.6, while CRP and PCT were significant markers from 3-10th days. When considering all markers together, CRP and IL-6 were significantly useful on 1st day, while CRP and PCT were useful from 3-10th days.

Conclusions/Learning Points: Congenital infections in premature newborns can be accurately predicted using IL-6, CRP, and