

# Does C-reactive protein help to diagnose the infection in new-born and neonatal in context to maternal immunological marker? An opinion

Comments on: **C-reactive protein levels in women with pre-labour rupture of membrane and women with normal labour**

Respected Editor,

Maternal and child health is connected with events during the pregnancy and delivery period. Pregnancy is the period when the mother's immune system is compromised. This can increase the chance of infection for the mother and the child during pregnancy and postpartum. Immunological markers like C-Reactive Protein (CRP), Procalcitonin, Interleukin (IL), and many others can help diagnose infections early.<sup>[1]</sup> As a result, timely diagnosis and treatment of infections can reduce the risk of complications and improve the health of the mother and child. Early detection of infection can also reduce the chance of infection transmission from mother to child during delivery.<sup>[2]</sup> Recently, we came across this article where the authors have studied levels of maternal CRP during normal labour and premature rupture of membranes (PROM). Hence, we additionally wish to highlight a few points on the importance of CRP levels for maternal and child health.

Immunological markers including CRP, Procalcitonin, Erythrocyte Sedimentation Rate (ESR), and IL are used for the detection of infection in the early stage. During the Covid-19 pandemic, changes in those markers could predict the severity of infection in patients.<sup>[3]</sup> The infection stage can be assumed on the increasing or decreasing trends of the CRP and other markers in subsequent samples. PROM is a condition where both mother and child have a higher risk of contracting an infection. In order to predict the possibility of infection in the newborn, Blossia S *et al.* study on maternal CRP levels in both groups of women failed to find any significant changes between both groups.<sup>[1]</sup> It does not mean that CRP level is not important to infection prediction in newborns and neonates.

Pradhan P *et al.* described CRP and other investigation results along with CSF cytology to detect neonatal infection in their study.<sup>[4]</sup>

In newborns and neonates, CRP levels were higher than in adults. CRP levels should be constantly monitored by clinicians to detect minute variations in levels. Normal value of CRP in adult is 2 mg/dL, whereas in newborn and neonatal, it is 5 mg/dL. Elevation in the CRP level starts within 6 hours and peak at 48 hours.<sup>[5]</sup> A rise in CRP above 20 mg/dL is always a sign of infection in patients. Early disease progression and assessment detection were crucial for better patient management and improved clinical outcome.<sup>[6]</sup>

As we know, the newborn life is a stage when a child is more susceptible to the infection. It not had their own immunity and it protect by innate immunity which get from mother. It is more important to assess and monitor them to prevent the severe infection level. Other factors like IL-6, Ferritin, total white blood cell count and others are also important but CRP level should be assessed very stickily can be prevent the fatality in newborn and neonatal patients.

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### Conflicts of interest

There are no conflicts of interest.

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