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M E D I C I N E J O U R N A L

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Authors: Yevhenii Symonets, Oleksandra Tuboltseva, Mahdi Al-Jeabory, Svitlana Doan

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Letter to the Editor

C-reactive protein in COVID-19 patients

Running head: C-reactive protein in COVID-19 patients

Yevhenii Symonets¹, Oleksandra Tuboltseva¹, Mahdi Al-Jeabory², Svitlana Doan¹

¹European School of Medicine, International European University, Kyiv, Ukraine

²Department of Trauma and Orthopedic Surgery, Ruda Slaska City Hospital, Ruda Slaska, Poland

Corresponding author:

Mahdi Al-Jeabory, Department of Trauma and Orthopedic Surgery,
Ruda Slaska City Hospital, Wincentego Lipa 2 Str., 41-703 Ruda Slaska, Poland , e-mail:
mmahdi@interia.pl, phone: +48696498240

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To the Editor,

we were interested in the article by Ansari-Moghaddam et al. referring to the role of complete blood cell counts and C-reactive protein (CRP) in COVID-19 patients. [1]. We fully agree that the search for early predictive markers in both COVID-19 and other diseases is extremely important, as it allows for the detection of the disease at an early stage and the early implementation of appropriate therapy [2]. Therefore, the analysis of the importance of CRP and other markers in COVID-19 is of key importance [3, 4].

C-reactive protein (CRP) is a biomarker commonly used to measure inflammation in the body. Elevated levels of CRP have been observed in patients with COVID-19, and it is thought to play a role in the severity of the disease. C-reactive protein (CRP) is produced by the liver in response to inflammation. It is considered to be a non-specific marker, meaning that it can be elevated in a wide range of conditions, including infections, autoimmune diseases, and cancer. However, in the case of COVID-19, CRP levels have been found to be particularly high, even in patients with mild symptoms.

Stringer et al. evaluated the role of CRP as a prognostic marker among 1,564 COVID-19 patients and showed that a threshold cut-off of CRP ≥ 40 mg/L performed well to predict mortality [5]. In another study by Smilowitz et al. CRP concentrations above 108 mg/L were associated with VTE, acute kidney injury, critical illness, and mortality, compared with CRP below this level [6].

The reason for the high CRP levels in COVID-19 patients is not entirely clear, but it is thought to be related to the severe inflammation that occurs in the lungs of patients with the disease. COVID-19 is a viral infection that causes severe damage to the respiratory system, and it is thought that the immune response to the virus leads to a significant amount of inflammation in the lungs [7]. This inflammation can cause the release of cytokines, which are chemicals that promote inflammation, and this in turn can lead to the production of CRP.

Another study that tried to correlate the CRP levels with the oxygen saturation level in COVID-19 patients found that patients with high CRP levels had a significantly higher risk of requiring oxygen therapy and intensive care [8]. The study also showed that CRP levels were an independent predictor of the need for oxygen therapy.

CRP levels are also thought to be associated with the risk of developing complications in COVID-19 patients. A study that looked at CRP levels in patients with COVID-19 found that those with high CRP levels were at a higher risk of developing pneumonia and acute respiratory distress syndrome (ARDS), which is a severe complication of COVID-19 that can lead to death [9].

In conclusion, C-reactive protein (CRP) is a biomarker that has been found to be elevated in COVID-19 patients. Elevated levels of CRP are thought to be associated with the severity of the disease, as well as the risk of complications such as pneumonia and ARDS. CRP levels have also been found to be an independent predictor of the need for oxygen therapy in COVID-19 patients. As such, CRP can be useful as a biomarker for monitoring the progression of the disease and for identifying patients who are at a higher risk of developing complications. It should be noted that CRP is not a specific marker for COVID-19 and high CRP levels can be caused by other conditions [10]. However, in the context of COVID-19, it can provide valuable information for clinical management and prognosis.

Conflict of interest

None declared.

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