DOI:10.34084/bshr.1184296 e-ISSN 2587-1641

Journal of Biotechnology and Strategic Health Research

Letter to the Editor / Editöre Mektup

http://dergipark.org.tr/tr/pub/bshr

COVID-19 Prognosis and Laboratory Parameters

COVID-19, Prognoz ve Laboratuvar Parametreleri

Hatice Şeyma Akça

University of Karamanoğlu Mehmet Bey, Karaman Education and Research Hospital, Department of Emergency Medicine, Karaman, Türkiye

ORCID ID: Hatice Şeyma Akça https://orcid.org/0000-0003-2823-9577

***Sorumlu Yazar / Corresponding Author:** Hatice Şeyma Akça, **e-posta / e-mail:** haticeseymaakca@gmail.com

Geliş Tarihi / Received : 25-11-2020 **Kabul Tarihi / Accepted:** 08-12-2020 **Yayın Tarihi / Online Published:** 31-12-2020

Atıf Gösterimi/How to Cite: Akça HS. COVID-19 prognosis and laboratory parameters, J Biotechnol and Strategic Health Res. 2020;4(3):250-252

Dear Editor,

It was aimed to emphasize the importance of CRP/albumin ratio in COVID-19 patients. We read your article titled 'The relationship of laboratory parameters and rates with prognosis and mortality in COVID-19 infection' with interest[1]. We think that this study will contribute to the literature in terms of the prognosis of COVID-19. The COVID-19 epidemic, which started in Wuhan in 2019 and then spread to many countries, was seen in our country for the first time in March 20201. Although there are changes in the number of cases during the summer months, the number of cases in Turkey reached the highest levels in December 2020 and continued its effect throughout the winter. With the introduction of vaccines in 2021, the number of cases was partially controlled[2].

In a study conducted in patients with COVID-19 pneumonia, it was found that the high CRP/albumin ratio was statistically significantly higher in patients who needed invasive mechanical ventilators[3].

When we evaluate the course of the COVID-19 pandemic, prognosis and treatment process, we can say that laboratory parameters are the subject of more studies[4,5]. In a retrospectively planned study of 2012 COVID-19 patients, it was found that lymphocyte and platelet ratios were statistically significantly lower in the non-survivor group. In the same study, C-reactive protein (CRP), neutrophil/lymphocyte ratio, and platelet/lymphocyte ratio were higher in the non-survivor group[4]. In another study involving COVID-19 patients, urea and creatinine values along with CRP were statistically significantly higher in the non-survivor group. In the same study, the CRP/albumin ratio was also high in the non-survivor group, but it was found that it was not superior to other laboratory parameters in terms of predicting mortality[5]. In the study planned by Ergenç et al., while platelet, one of the hemogram parameters, was statistically significantly higher in the non-survivor group; lymphocyte was low. While the creatinine level was significantly higher in the non-survivor group; CRP and CRP/albumin ratio were also statistically significantly higher in the non-survivor group. Differently, it was stated in this study that the CRP/albumin ratio may be more effective in determining the prognosis compared to other parameters[1].

As a result, the CRP/albumin ratio can be used as a prognostic marker in COVID-19 patients.

Key words: COVID-19, C-reactive protein (CRP), CRP/albümin ratio

References

1. *Ergenç H, Ergenç Z, Araç S, et al. The relationship of laboratory parameters and rates with prognosis and mortality in COVİD-19 infection. J Biotechnol and Strategic Health Res. 2022;6(1):23-33.*
2. *Republic of Turkey Ministry of Health. COVID-19 Information page. 2022 (Updated 2022 Oct 3). Available from:https://covid19.saglik.gov.tr/TR-66935/genel-koronavirus-tablosu.html.*
3. *İnce U, Duran HT, Yıldırım Y. The use of CRP / albumin ratio as an indicator of severe COVİD-19 disease in intensive care units. Med Sci. 2022;11(1):228-32. Doi: 10.5455/medscience.2021.06.208.*
4. *Özdemir S, Eroğlu SE, Algın A, et al. Analysis of laboratory parameters in patients with COVİD-19: Experiences from a pandemic hospital. Ann Clin Anal Med. 2021;12(4):518-23. Doi: 10.4328/ACAM.20678.*
5. *Özdemir S, Algin A. Evaluation of the ability of the C-reactive protein-to-albumin ratio to predict short-term mortality in patients with COVİD-19. J Clın med kaz. 2021;18(6):35-9. Doi:10.23950/jcmk/11324.*