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RESPONSE TO LETTER TO THE EDITOR

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Original Article: Evaluation of eosinopenia as a diagnostic and prognostic indicator in COVID-19 infection

Dear Editors,

At the outset, I would like to thank Duijnhoven van et al. for their keen interest in my research paper. To begin with, it is important to note that the results of the study by Duijnhoven van et al. in Dutch patients, and that by the author in Indian patients both indicate that low eosinophil count is an early indicator of possible COVID-19 infection. The Dutch study reveals a much lower median eosinophil count in COVID-19 positive patients compared to their RT-PCR negative group. Also Figure 1 clearly indicates a correlation between the increase in incidence of eosinopenia and incidence of COVID-19 infection, both in the first as well as in the second wave.

In the original paper, the author has suggested the use of eosinopenia in the setting of a pandemic for early identification, triaging, and isolation of patients till nucleic acid test results become available. It was not suggested as an alternative to RT-PCR. The Dutch researchers also agree that "low eosinophil count can be helpful as a signal to (re)consider COVID-19 infections."

The sensitivity of eosinopenia as a diagnostic indicator is comparable in both the studies, whereas there is a difference in its specificity for the same. In the study by Duijnhoven van et al., nearly 36% of the RT-PCR negative patients had eosinopenia. However, in the corresponding period of the previous year (2019), eosinopenia was reported in only 15% of patients. Thus, it needs to be ascertained if only a particular subset of admitted patients formed the comparator group resulting in the inclusion of higher number of cases with eosinopenia in this group. The communication does not specify the time period for which the patient data were retrieved. This is relevant to determine if the data from the 2 groups are representative of the prevailing pandemic situation at that time. In our study, during the study period, routine patients were not frequenting the hospital. This could have limited the inclusion of patients with eosinopenia for causes other than COVID-19. This possible bias has already been stated in the study limitations.

The communication from Duijnhoven van et al. does not mention the inclusion and exclusion criteria, so it is not clear if patients on corticosteroids were included in the study. Corticosteroid use, which results in eosinopenia, was an exclusion criterion in our study.

Further, to provide more context to the study findings, it is important to know the biological reference interval in the study population, which has not been provided in the communication.

Since the conclusion of both the studies remains the same, it further corroborates the use of this inexpensive, easily available biomarker for an early identification of COVID-19 patients, till nucleic acid test reports are available.

KEYWORDS

COVID-19, diagnostic, eosinopenia, eosinophils, prognosis

CONFLICT OF INTEREST

The author has no competing interests.

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