Letters

COMMENT & RESPONSE

Short-term Outcomes of Corticosteroid Monotherapy in COVID-19–Associated Multisystem Inflammatory Syndrome in Children—Handle With Caution

To the Editor

I thank Villacis-Nunez and colleagues1 for their cohort study comparing short-term patient outcomes based on initial treatment with corticosteroids, intravenous immunoglobulin (IVIG), or both. Though they concluded that corticosteroid monotherapy was a reasonable management option for a subset of patients with multisystem inflammatory syndrome in children (MIS-C), particularly those with mild disease, there were several limitations to this study, and it is crucial that the findings should be interpreted with caution.

First, there was system involvement of 3 or fewer organ systems in the database, so it was unclear whether patients who had only 1 involved organ system were incorporated in the study1; if so, it was not in accord with the US Centers for Disease Control and Prevention (CDC) disease definition of MIS-C.2 Also, lymphocytopenia, neutrophilia, and elevated interleukin 6 level, which were included in the CDC disease definition of MIS-C,2 were not available in the database of severe inflammation of the study.1 Additionally, arthralgia and arthritis, summarized as the clinical features of MIS-C in the study by Yener and colleagues,3 were absent in the system involvement of baseline characteristics, and in the worsening or lack of improvement of noncardiac clinical parameters after initial treatment with corticosteroids, IVIG, or both, and there was no history of COVID-19 vaccination in the database of the study.1 All of these might be potentially confounding factors.

Second, the study did not account for whether the treatment of some patients in the study1 was combined with the antiviral therapies, such as remdesivir, superior in shortening the recovery time of adults hospitalized with COVID-19 in comparison with placebo,4 or whether the group receiving corticosteroid monotherapy received a significantly higher percentage of antiviral therapies than did the group receiving IVIG plus corticosteroids.

Third, the proportion of patients with system involvement, platelet count less than 150 × 10^9/L, multiply by 1), as well as vasoactive use and intensive care status in the group receiving IVIG plus corticosteroids was significantly larger than the corticosteroid monotherapy group, while the spectrum of COVID-19–associated MIS-C extends from mild to severe,5 so it is possible that there was a significantly greater proportion of patients with severe disease in the group receiving IVIG plus corticosteroids compared with the group receiving corticosteroid monotherapy. Finally, as discussed in the study,1 initial therapy failure was more likely because of abnormal cardiac parameters in patients receiving corticosteroid monotherapy in comparison with those receiving IVIG plus corticosteroids, so a strong demand is ongoing for further confirmation to strengthen and inform the safety of the short-term effects of corticosteroid monotherapy in treating MIS-C.

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