

Response comment on: Retinal manifestations in patients following COVID-19 infection

Dear Editor,

We thank the authors for their interest.^[1] We respectfully disagree that “most cases were from the side effects of systemic steroids/medications” alone. We have already acknowledged the contributory role of steroids in the discussion section; however, we cannot disregard the role of COVID-19 in our cases.^[2]

In Case 1, steroids were used for 5 days only and not expected to cause endogenous endophthalmitis in a young, otherwise immunocompetent, previously nondiabetic patient. COVID-19 and host immunity-virus interplay were a factor here.^[3,4] In our experience, systemic investigations (such as blood/urine cultures/abdominal ultrasound) sans constitutional symptoms are rarely positive, and he had recently undergone a complete workup following recovery.

For COVID-19 treatment during late 2020–early 2021, systemic steroids were not in rampant usage unlike the practice patterns noted later. Case 2 was a well-controlled diabetic for a few years. We believe immunosuppression was caused additionally by the primary COVID-19 infection, as reported earlier,^[3,4] with a specific vulnerability to fungal infections due to a decrease in CD4+ and CD8+ T-cells. Invasive candidiasis coinfection in COVID-19 infection has been reported to be independent of steroid use.^[4] In Case 3, propagation of tubercular infection was possibly due to immune-deviation caused by COVID-19 as the latter causes cytokine over-expression, which can predispose to tuberculosis.^[4] The Infectious Disease specialists did not consider sputum culture as there was no history of productive cough/fever during their evaluation. The whole-body positive

emission tomography/computed tomography (PET/CT) scan was negative.

In Case 6, there was no history of airway intubation, cardiopulmonary resuscitation, or prone position. The hemorrhages were due to her severe thrombocytopenia, as reported in literature.^[5]

In conclusion, while we agree that steroids/diabetes may have contributed to the immunosuppression in two of the three infective cases, the specific immune dysregulation caused by COVID-19 infection was the most important predisposing factor.

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Conflicts of interest

There are no conflicts of interest.

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