

Comments on: Retinal vein occlusion in COVID-19: A novel entity

Dear Editor,

We congratulate Sheth *et al.* for their article certainly did describe a very unique entity of retinal vein occlusion (RVO) secondary to Coronavirus disease (COVID-19).^[1] The report shares clinically relevant information and strategy that would be necessary to follow in the differential diagnosis of ocular conditions, particularly in patients with recent history of COVID-19. Authors have made a presumptive diagnosis as vasculitic-RVO secondary to COVID-19 based on the ocular clinical presentation and the currently known pathobiology of COVID-19. The authors have performed a detailed systemic workup for vasculitic and non-vasculitic causes of RVO and state that the tests did not reveal any remarkable factors. Given the very recent history of COVID-19 in the patient, additional investigations such as serum D-dimer, serum ferritin, lactate dehydrogenase (LDH), serum troponin and interleukin-6^[2,3] would have been helpful to know the systemic coagulability

and/or inflammatory status secondary to COVID-19 and its relationship with vasculitic-RVO. Since the patient was affected by a mild form ahead of COVID-19 based on the time to discharge history (in 1 week) and with unremarkable hematological findings (CRP, ESR, etc.), it is unlikely that the patient might have "experienced" a cytokine storm. Hence, vasculitic-RVO may not have been secondary to a cytokine storm, but yet would have been secondary to COVID-19.

It would be beneficial to know the rationale behind the use of intravitreal anti-vascular endothelial growth factor (anti-VEGF) injection of ranibizumab biosimilar, Razumab® (Intas Pharmaceuticals, Ahmedabad, India; 0.5 mg/0.05 mL) for this patient, in addition to systemic steroid therapy. Systemic steroid therapy alone might have controlled the eye inflammation and macular edema in this case. Further management, including the use of intravitreal anti-VEGF could have been based on response to systemic steroid therapy.

This report indicates the possibility of COVID-19 associated ocular presentations of vascular occlusion. Hence, it would be highly relevant to expand the systemic workup parameters

to include COVID-19 pathobiology associated factors as discussed earlier for a more definitive differential diagnosis and to unravel the mechanism underlying the pathogenesis of COVID-19 associated ocular disease.

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Conflicts of interest

There are no conflicts of interest.

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