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Case Presentation: Central Retinal Vein Occlusion (CRVO) accompanied by cilioretinal artery occlusion (CLRAO) in a young patient, following COVID-19 infection and Anti-COVID vaccination.

Abstract:

Introduction: Central retinal vein occlusion is a retinal vascular disease that, in some rare cases, is associated with cilioretinal artery occlusion, leading to sudden loss of vision in that eye. The pathophysiology of the disease is quite complex and involves various mechanisms of hemodynamics and retinal vascular perfusion. Common risk factors include: advanced age, arterial hypertension, hyperlipidemia, diabetes mellitus, oral contraceptives, thrombophilias, etc. According to the medical data reviewed, this disease has also appeared in some young individuals with no systemic disease history, following COVID-19 infection and vaccination, as illustrated in the case presented in this paper.

Objective: To describe the clinical presentation, risk factors, pathophysiology, diagnostic methods, and treatment course of a clinical case involving a young patient with central retinal vein occlusion accompanied by cilioretinal artery occlusion, following COVID-19 infection and vaccination.

Methodology: The method of this work is a case presentation. We selected a clinical case from our practice and described and illustrated the management of the case, including the history, fundoscopic examination, imaging diagnostic methods (OCT and FFA), laboratory analyses, treatment, and monitoring of the disease course.

Conclusion: COVID-19 infection and the anti-COVID vaccine were the only identified risk factors in the studied case. With the advent of the COVID-19 pandemic, an increase in the incidence of vascular diseases across all organ systems, including the eye, has been reported. According to the medical data reviewed, similar cases of retinal vascular diseases following COVID-19 infection or anti-COVID vaccination have also been reported in other international medical centers, as discussed in their publications. Central retinal vein occlusion with cilioretinal artery occlusion represents a retinal vascular disease that constitutes a clinical emergency, where early diagnosis and adequate management are essential for preserving vision and minimizing associated complications. In cases where we have partial CRVO, the non-ischemic form, and when the cilioretinal artery occlusion is incomplete and does not directly involve the macular region, the prognosis is good with visual recovery >0.5 in 70% of cases.

Keywords: CRVO, cilioretinal artery, vascular disease, COVID-19