




Bilateral Ampiginous Choroiditis following Confirmed SARS-CoV-2 Infection


Erika Moreira Carvalho, Fernando Henrique Flores Teixeira, Alexandre de Carvalho Mendes Paiva, Nathalia Silva Santos, Ana Luiza Biancardi & André Luiz Land Curi

To cite this article: Erika Moreira Carvalho, Fernando Henrique Flores Teixeira, Alexandre de Carvalho Mendes Paiva, Nathalia Silva Santos, Ana Luiza Biancardi & André Luiz Land Curi (2023) Bilateral Ampiginous Choroiditis following Confirmed SARS-CoV-2 Infection, Ocular Immunology and Inflammation, 31:4, 843-846, DOI: [10.1080/09273948.2022.2049317](https://doi.org/10.1080/09273948.2022.2049317)

To link to this article: <https://doi.org/10.1080/09273948.2022.2049317>

 Published online: 11 Apr 2022.

 [Submit your article to this journal](#) 

 Article views: 158

 [View related articles](#) 

 [View Crossmark data](#) 

LETTER TO THE EDITOR



Bilateral Ampiginous Choroiditis following Confirmed SARS-CoV-2 Infection

Erika Moreira Carvalho, MD , Fernando Henrique Flores Teixeira, MD , Alexandre de Carvalho Mendes Paiva, MD , Nathalia Silva Santos, MD , Ana Luiza Biancardi, MD, PhD , and André Luiz Land Curi, MD, PhD 

Laboratory of Infectious Diseases in Ophthalmology, Oswaldo Cruz Foundation, Rio de Janeiro, Brazil

ABSTRACT

Introduction: Ampiginous Choroiditis is a rare posterior uveitis that combines clinical features of Acute Multifocal Posterior Placoid Pigment Epitheliopathy and Serpiginous Chorioretinitis. Its pathophysiology is poorly understood and further studies are necessary to understand which mechanisms start the immunologic reaction.

Case report: The purpose of this article is to report a well-documented case of Ampiginous Choroiditis following in seven days a RT-PCR confirmed SARS-CoV-2 infection, suggesting that the infection might have contributed as a trigger.

Conclusion: Timely diagnosis and correct treatment are paramount to improve the visual outcomes, and the patient had successful response to systemic steroids.

ARTICLE HISTORY

Received 3 January 2022

Revised 10 February 2022

Accepted 22 February 2022

KEYWORDS

COVID-19; Ampiginous choroiditis; white dot syndromes

Dear Editor,

Ampiginous Choroiditis is an inflammatory chorioretinopathy¹ that combines clinical features of Acute Multifocal Posterior Placoid Pigment Epitheliopathy (APMPPE) and Serpiginous Chorioretinitis (SC). While APMPPE is often a self-limited condition with good visual prognosis, SC is a progressive condition with high risk of visual disability. The characteristic ampiginous lesions are yellowish white plaques with geographical borders, being smaller than those found in SC and APMPPE.²

Although autoimmune etiology is the most commonly described, the disease pathogenesis remains unknown. There are case reports secondary to conditions such as tuberculosis,³ presumed SARS-CoV-2 infection⁴ and following quadrivalent human papilloma virus vaccine.⁵ Also, APMPPE is often

followed by a flu-like illness and has been reported in a convalescent COVID-19 patient.^{4,6} Treatment of the acute lesions is generally based on the association of corticosteroids with immunosuppressants.²

A 22-year-old man, with no comorbidities, underwent RT-PCR examination from nasopharyngeal swab because he had been in contact with a patient with confirmed COVID-19. Three days after collection and confirmation of Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2), he began with headache, myalgia and cough. He started taking Dipyron 500 mg every 6 h to relieve the symptoms, and after 4 days, he evolved with a bilateral and painless reduction in visual acuity. Tuberculin skin test, chest radiography, HIV, and syphilis antibodies were all negative. On



Figure 1. Retinography showing multiple bilateral placoid lesions throughout the posterior pole.

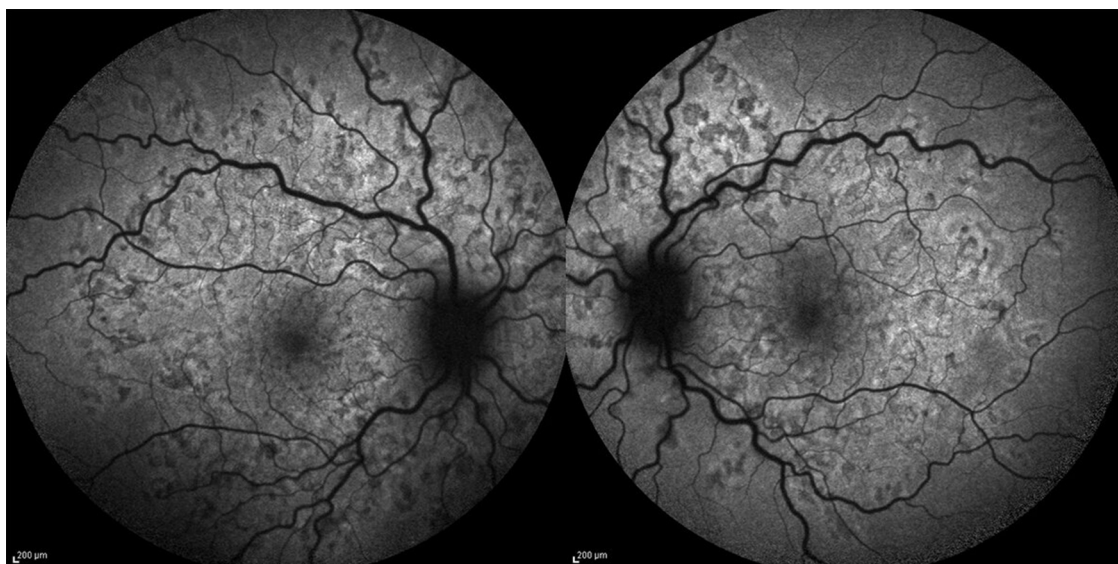


Figure 2. Fundus autofluorescence showing hypoautofluorescent lesions with hyperautofluorescent margins.

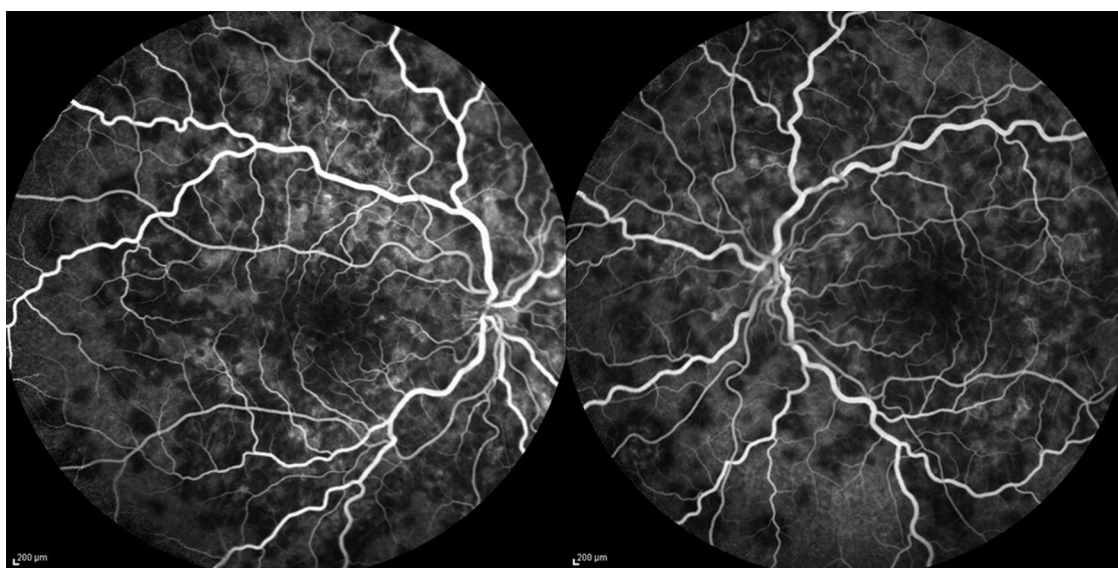


Figure 3. Early phase of fluorescein angiography showing multiple hypofluorescent lesions throughout the posterior pole.

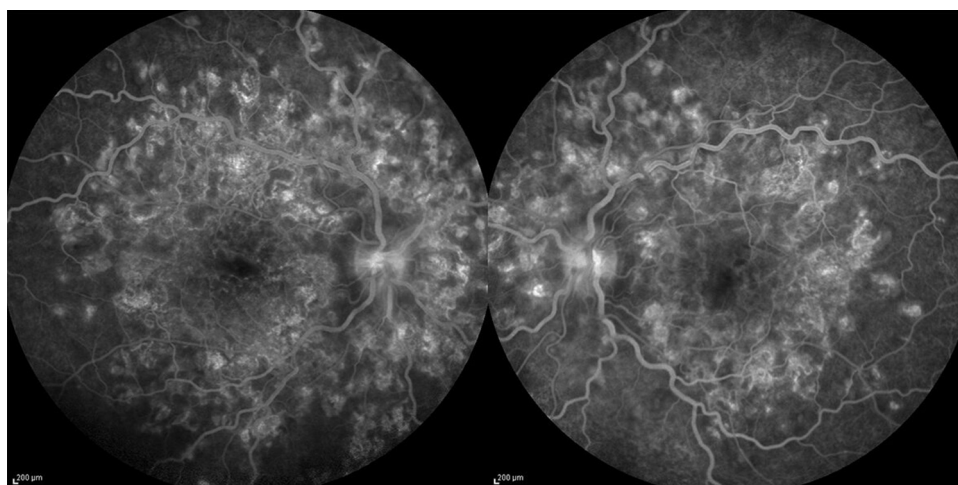


Figure 4. Late phase of fluorescein angiography showing staining of the lesions.

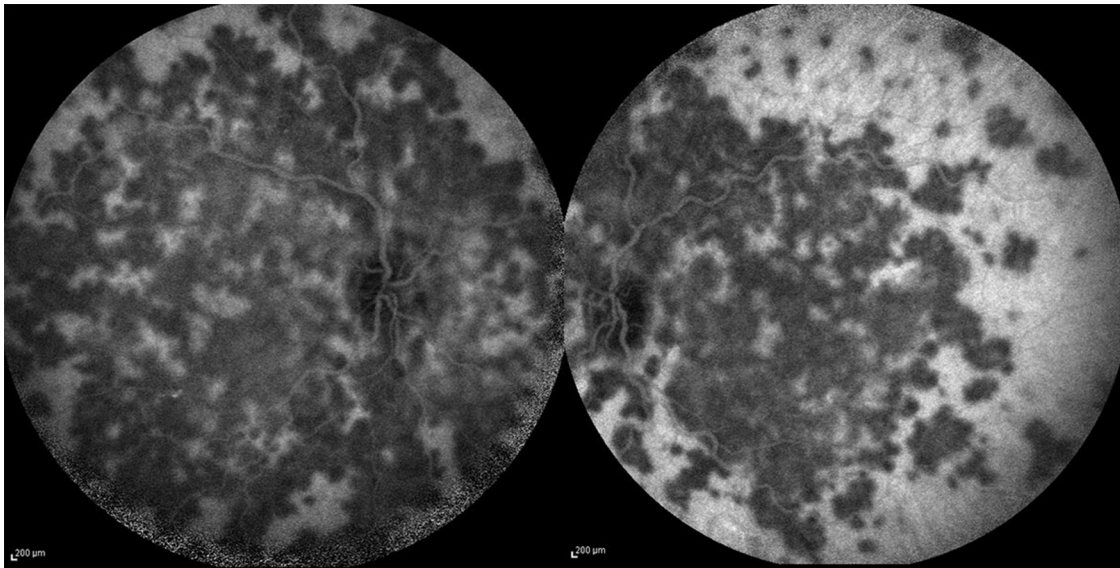


Figure 5. Indocyanine green angiography showing hypofluorescent lesions through the entire exam.

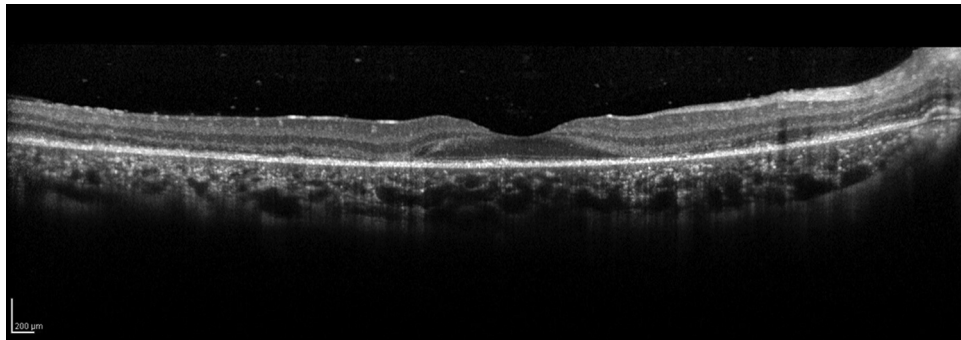


Figure 6. OCT image of the right eye showing vitreous cells and disruptions on the ellipsoid zone.

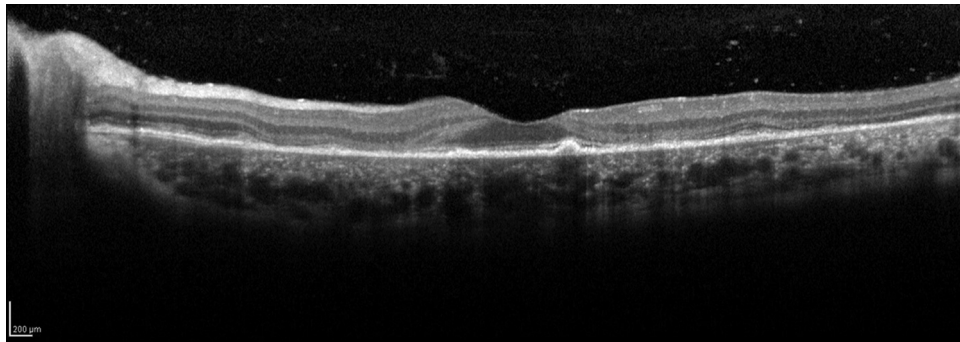


Figure 7. OCT image of the left eye showing vitreous cells, disruptions on the ellipsoid zone and areas of focal thickening of the RPE/Bruch's membrane.

examination, he had a visual acuity of 20/50 in both eyes and an anterior chamber reaction of +0.5/+4. The anterior vitreous exhibited discrete cells. Funduscopy showed bilateral placoid lesions throughout the macula and midperiphery (Figure 1) that were hypoautofluorescent with a hyperautofluorescent margin (Figure 2). On fluorescein angiography, hypofluorescence was noted in the early phase (Figure 3), with late staining (Figure 4). Hypofluorescent lesions were observed on indocyanine green angiography through the entire exam (Figure 5). OCT showed vitreous

cells, disruptions on the ellipsoid zone and areas of focal thickening of the RPE/Bruch's membrane (Figure 6, 7). The patient was treated with Prednisolone 0.5 mg/kg/day, with slow tapering over 2 months, reaching 20/20 of vision in both eyes. To the best of our knowledge, there has not been reports of this disease following a confirmed COVID-19 infection. This case suggests that infectious entities such as the SARS-CoV-2 may work as an immunogenic trigger mechanism to the development of the Ampiginous Choroiditis in susceptible hosts.

Disclosure statement

The authors report no conflict of interest. The authors alone are responsible for the content and writing of the paper.

Funding

No specific financial support was available for this study.

ORCID

Erika Moreira Carvalho, MD  <http://orcid.org/0000-0003-2303-8522>
Fernando Henrique Flores Teixeira, MD  <http://orcid.org/0000-0002-7429-3294>
Alexandre de Carvalho Mendes Paiva, MD  <http://orcid.org/0000-0002-9774-1635>
Nathalia Silva Santos, MD  <http://orcid.org/0000-0002-2328-6369>
Ana Luiza Biancardi, MD, PhD  <http://orcid.org/0000-0002-0169-7001>
André Luiz Land Curi, MD, PhD  <http://orcid.org/0000-0002-2764-4047>

References

1. Lambrecht P, Claeys M, De Schryver I. A case of ampiginous choroiditis. *Case Rep Ophthalmol*. 2015;6(3):453–457. doi:10.1159/000442742.
2. Jyotirmay B, Jafferji SS, Sudharshan S, et al. Clinical profile, treatment, and visual outcome of ampiginous choroiditis. *Ocul Immunol Inflamm*. 2010;18(1):46–51. doi:10.3109/09273940903402637.
3. SS BHUIBHAR, Biswas J. Nested PCR-positive tubercular ampiginous choroiditis: a case report. *Ocul Immunol Inflamm*. 2012;20(4):303–305. doi:10.3109/09273948.2012.685684.
4. Tom ES, Mckay KM, Saraf SS. Bilateral ampiginous choroiditis following presumed SARS-CoV-2 infection. *Case Rep Ophthalmol Med*. 2021;2021:e1646364. 6 ago. 2021
5. Khalifa YM, Monahan PM, Acharya NR. Ampiginous choroiditis following quadrivalent human papilloma virus vaccine. *British J Ophthalmol*. 2010;94(1):137–139. doi:10.1136/bjo.2009.159293.
6. Olgún-manriquez F, Cernichiaro-espínosa L, Olgún-manriquez A, et al. Unilateral acute posterior multifocal placoid pigment epitheliopathy in a convalescent COVID-19 patient. *Int J Retina Vitreous*. 2021 May 25;7(1):41. doi:10.1186/s40942-021-00312-w.