

# ACUTE VISUAL LOSS DUE TO DENGUE MACULOPATHY IN A HEALTHY YOUNG PATIENT

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## Purpose:

Dengue is a disease that affects around 50 million people a year worldwide, and around 40% of those infected present ocular symptoms, reaching 10% prevalence of maculopathy in hospitalized cases. This paper aims to report the case of a 27-year-old, female who developed foveolitis after systemic infection with the dengue virus.

## Case report:

The patient was referred complaining of poor vision for a week, and denied other previous ophthalmological comorbidities or symptoms. She also reports a high fever, petechiae in the limbs, back pain, prostration, low platelets 15 days prior with complete resolution a few days before the ophthalmological symptoms.

## Methods:

Patient underwent clinical evaluation, ophthalmological evaluation, laboratory tests and multimodal ocular evaluation, After that, a literature review was carried out on similar cases

## Ophthalmic Evaluation:

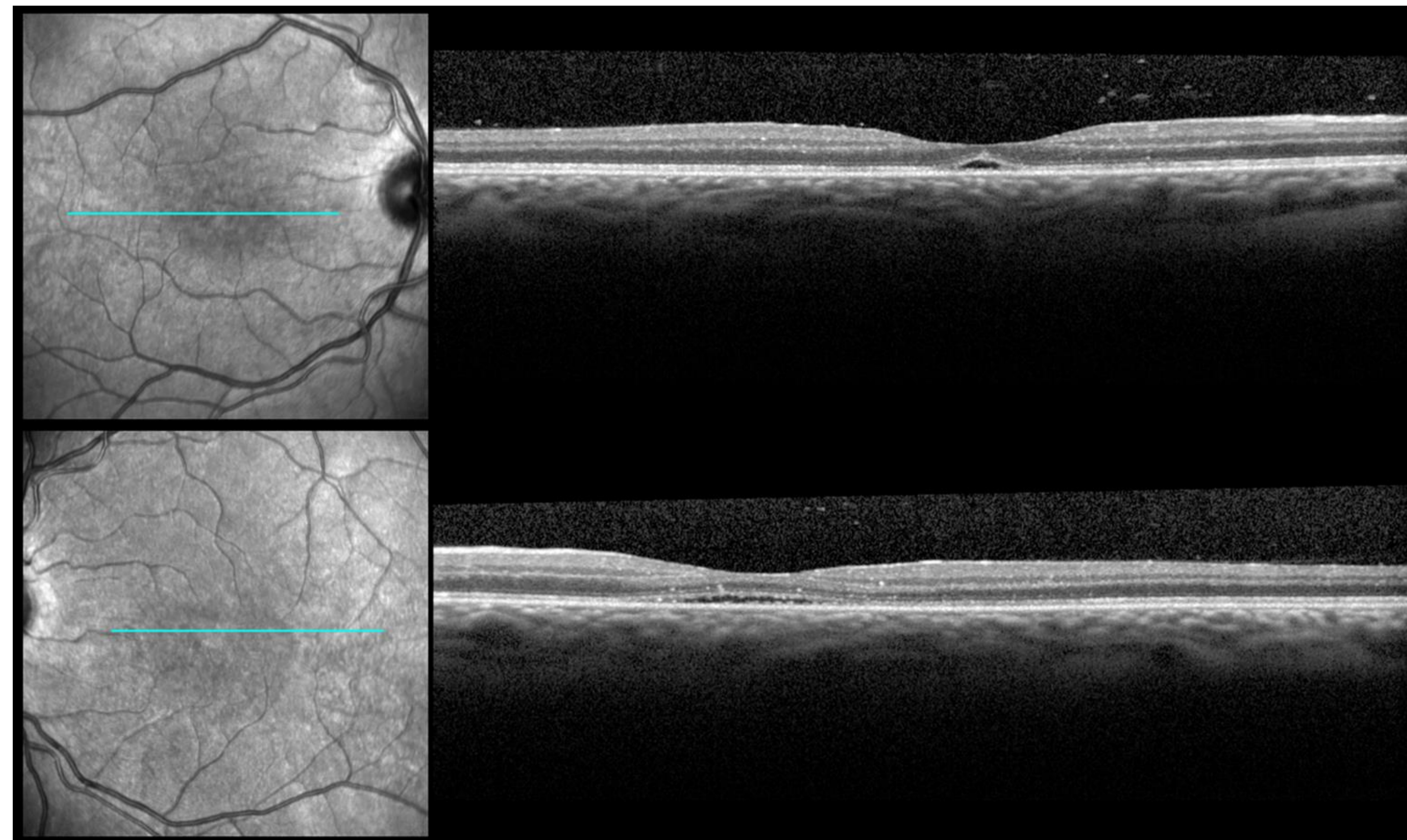
During evaluation, there were no systemic symptoms, best corrected visual acuity in the right eye was (OD) 20/60 and in the left eye (OS) was 20/125. Biomicroscopy was unremarkable, intraocular pressure of both eyes was 14 MMHG.

In both eyes, fundus examination, showed only a slight reduction of macular brightness near to the fovea





However, the optical coherence tomography (OCT) showed a discrete disorder of the external segments of the photoreceptors and a subfoveolar retinal detachment. Fluorescein angiography showed in both eyes foveal hypofluorescence and a discrete area of hyperfluorescence temporally of the macula corresponding to the involvement of the pigment epithelium.



OCT Right eye and Left eye



Angiography OD

Angiography OS

- Fluorescein angiography showed in both eyes foveal hypofluorescence and a discrete area of hyperfluorescence temporally of the macula.

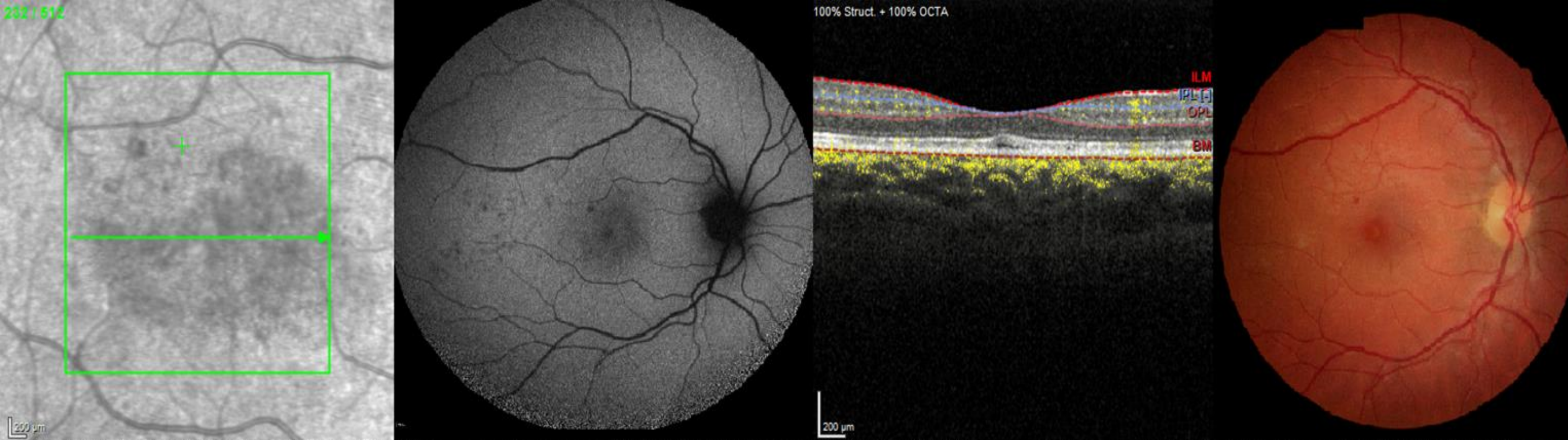


- The suspicion of dengue maculopathy was raised and laboratory and serological tests were requested, as well as sorologies.
- The results were positive for dengue, corroborating the previous suspicion of the diagnosis, since this diagnosis was not made at the time of the initial clinical symptoms.

Exam	Results
HB	13,0
Platelets	440.000
FTABS	NR
HIV	NR
HBSAG	NR
HCV	NR
TOXOCARIASIS	NR
TOXOPLASMOSIS	NR (IGG, IGM)
Elisa Dengue IGM	+
CMV (IGM/IGG)	NR/+
PPD	NR
VDRL	NR
PCR	0,26 MG/DL
ANA	NR
RHEUMATOID FACTOR	NR

Laboratory tests

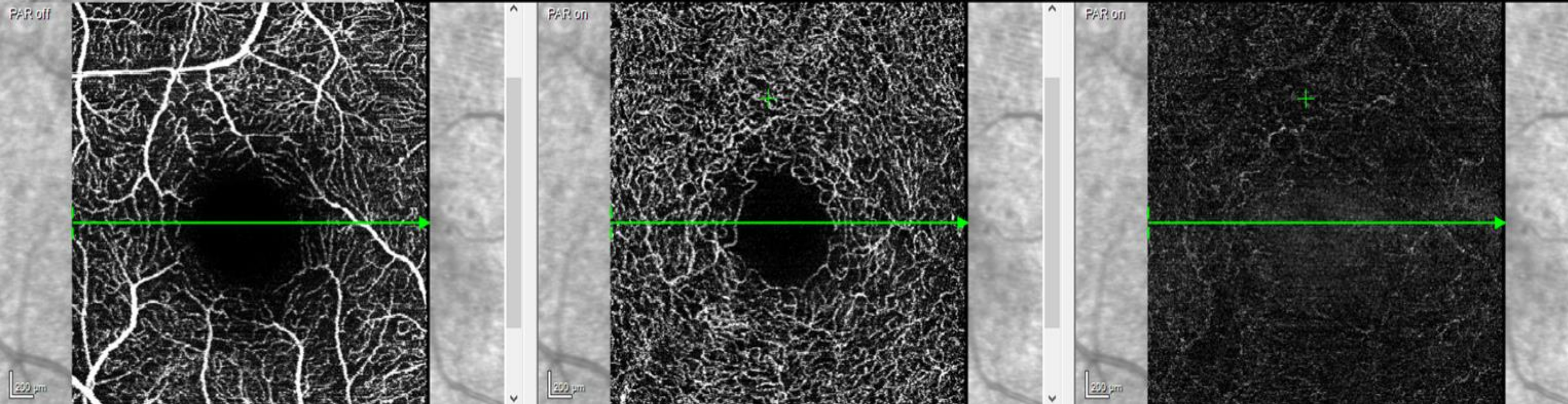




Due to the of subfoveal serous retinal detachment and probable diagnosis of dengue maculopathy, prednisone was started at 60 milligrams per kilogram per day, with a slow dose reduction.

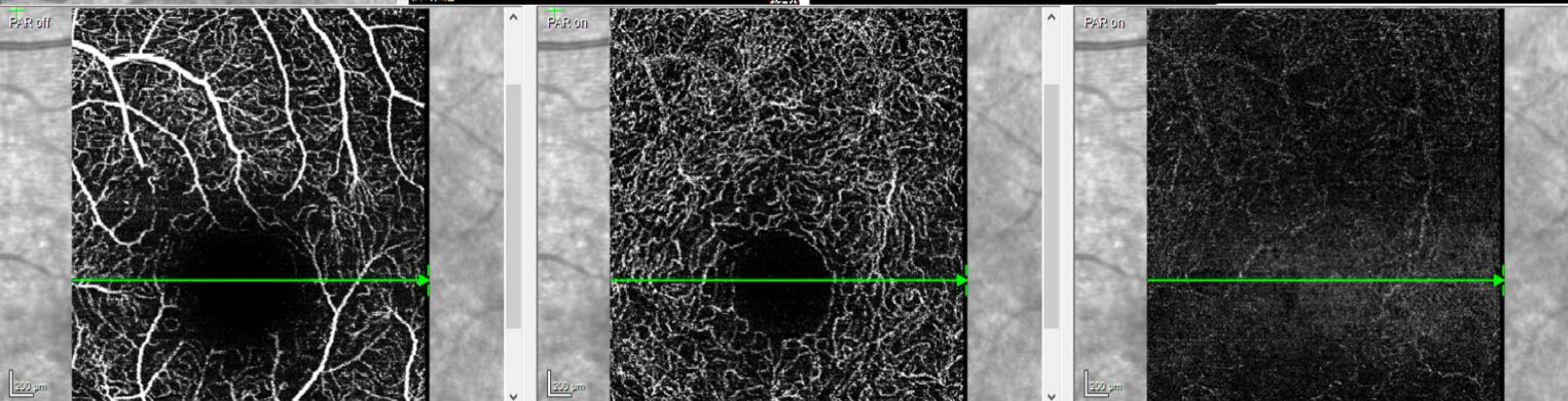
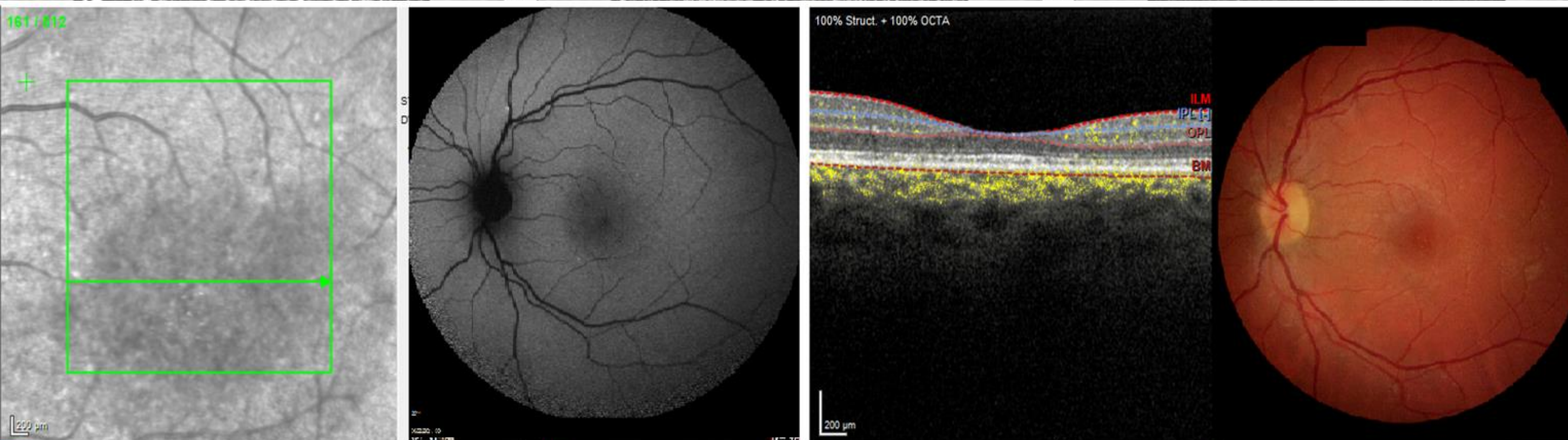
After 2 weeks, the patient presented partial improvement in visual acuity of OD 20/50 and maintenance of OS 20/125.

After 2 months, patient's vision improves to 1.0(OD) and 0.8(OS).



After 2 weeks, the multimodal evaluation of both eyes (shown on the side) revealed hypoautofluorescent points in the temporal region in the Red-Free image and in the autofluorescence (AF) corresponding to involvement of the retinal pigment epithelium (epitheliopathy), and also a resolution of serous detachment and rupture of the ellipsoid zone.

On OCT-A, reduced flow in the deep vascular plexus (beehive-shaped defects) close to the foveal region. These findings have been previously described in the literature.





## Conclusion

- Similar cases demonstrating foveolitis have been described in the literature and vision improvement occurs in the mean time of 6 months.
  - Epiteliopathy may arise as a complication of dengue disease, caused by dengue viral-targeted T cells, as described in preclinical studies examining the pathogenesis of dengue-related complications.
  - Steroids may be considered in cases where dengue fever results in ocular complications such as macular and/or optic nerve involvement, poor initial visual acuity, and evidence of progressive ocular disease.
  - Multiple imaging modalities can aid in identifying, monitoring, and comprehending the pathogenesis of ocular complications.
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