Primary vitreoretinal lymphoma rapidly responsive to intravitreal methotrexate therapy in a patient debilitated by AIDS

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PURPOSE: To report a severe case of Primary vitreoretinal lymphoma (PVRL) responsive to methotrexate intravitreal injections therapy in a patient immunocompromised by AIDS.

METHODS: Case presentation of a 43-year-old male diagnosed with HIV/AIDS were complaining of a painless BCVA decrease, mainly in the OD eye. At baseline, the BCVA was CF in OD and 20/100 in the OS. Ocular anterior segment examination revealead slight anterior chamber cellularity in OU eyes with regular IOP measure. The retina examination showed extensive yellowish, elevated, multifocal subretinal lesions in OD (figure 1AB) and a couple of small lesions at posterior pole in OS (figure 1CD). Based on SDOCT lesions characteristics it was presumed a PVRL and iniciated intravitreal injections of methotrexate (400µg/ml) in the OD twice a week in the first two weeks and once a week foward next two weeks (figure 2 and 3). OCTA depicts flow rate irregularities from DCP and choriocapillaries mainly at OD with ORL atrophy (figure 4). In the OS, OCTA reveals small vascularized PED besides to the fovea (figure 5).

FIGURE 1: Fundus imaging. Baseline: AB, right eye and CD, left eye.

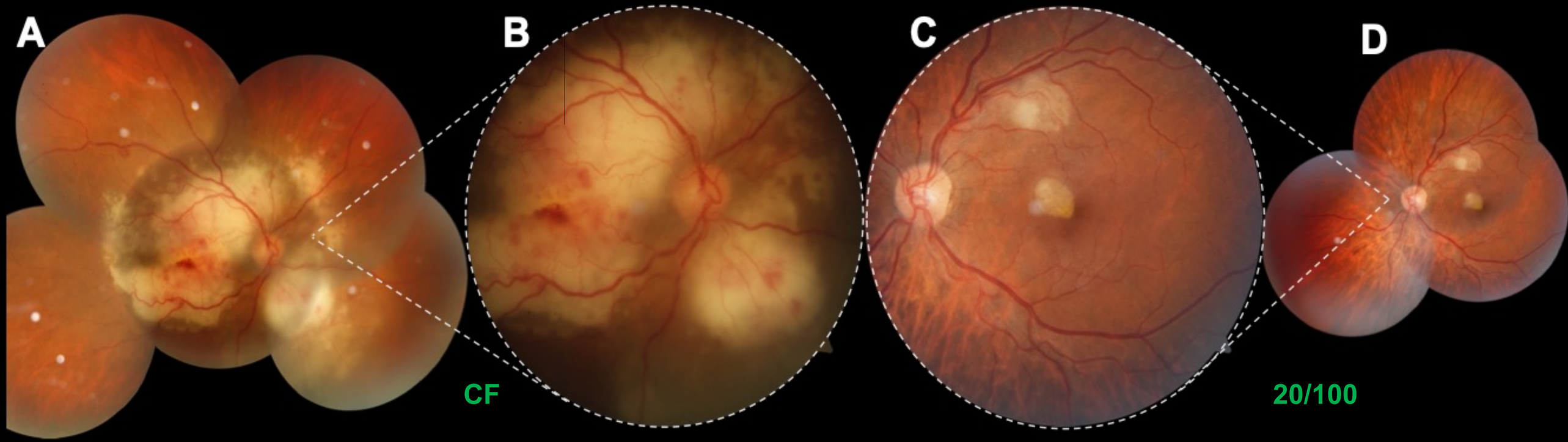
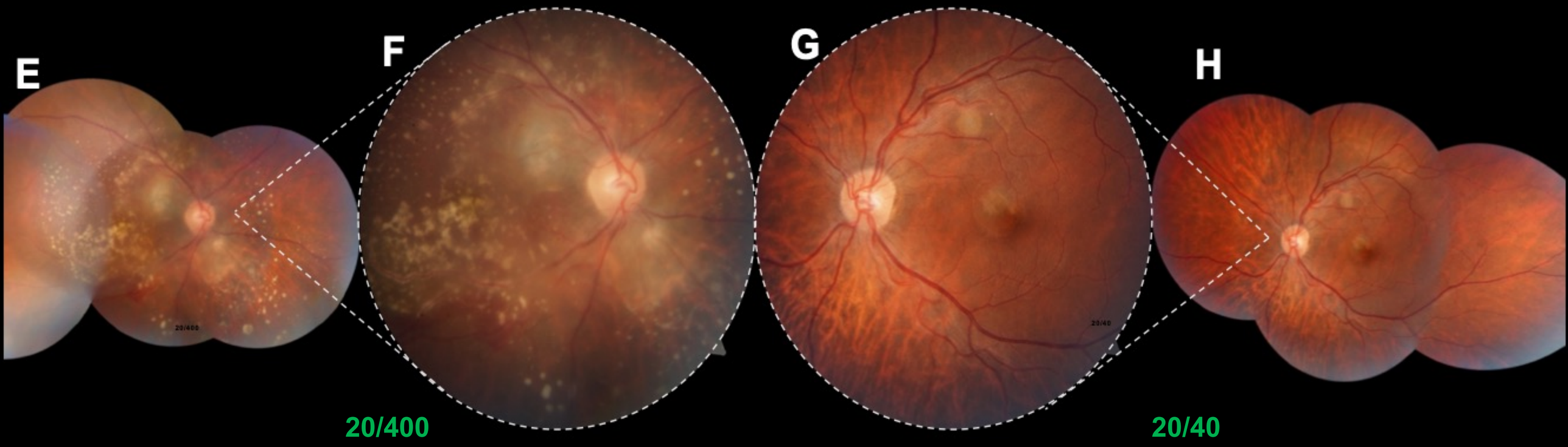


FIGURE 2. A month follow-up: EF, right eye after methotrexate intraveal injections. The lesions getting improvement. GH, left eye untreated. The small lesions still in monitoring.



ABREVIATIONS: AIDS, acquired immunodeficiency syndrome; BCVA; best corrected visual acuity; CF, counter finger; OU, oculus uterque; OD, oculus dexter, OS, oculus sinister; IOP, intraocular pressure; SD-OCT, spectral-domain optical coherence tomography, IR, near-infrared reflectance; AF, autofluorescence; ORL, outer retina layers; DCP, deep capillary plexus; OCTA, OCT angiography.

FIGURE 3. Multimodal imaging. Baseline (OD/OS): AE, SD-OCT. BF, near-IR. CG, AF. DH, color fundus. **A month follow-up:** After 6x intravitreal injections the huge subretinal lesion decreased in OD with ORL atrophy sequelae (I) and OS with quiescent vascularized PED (N)
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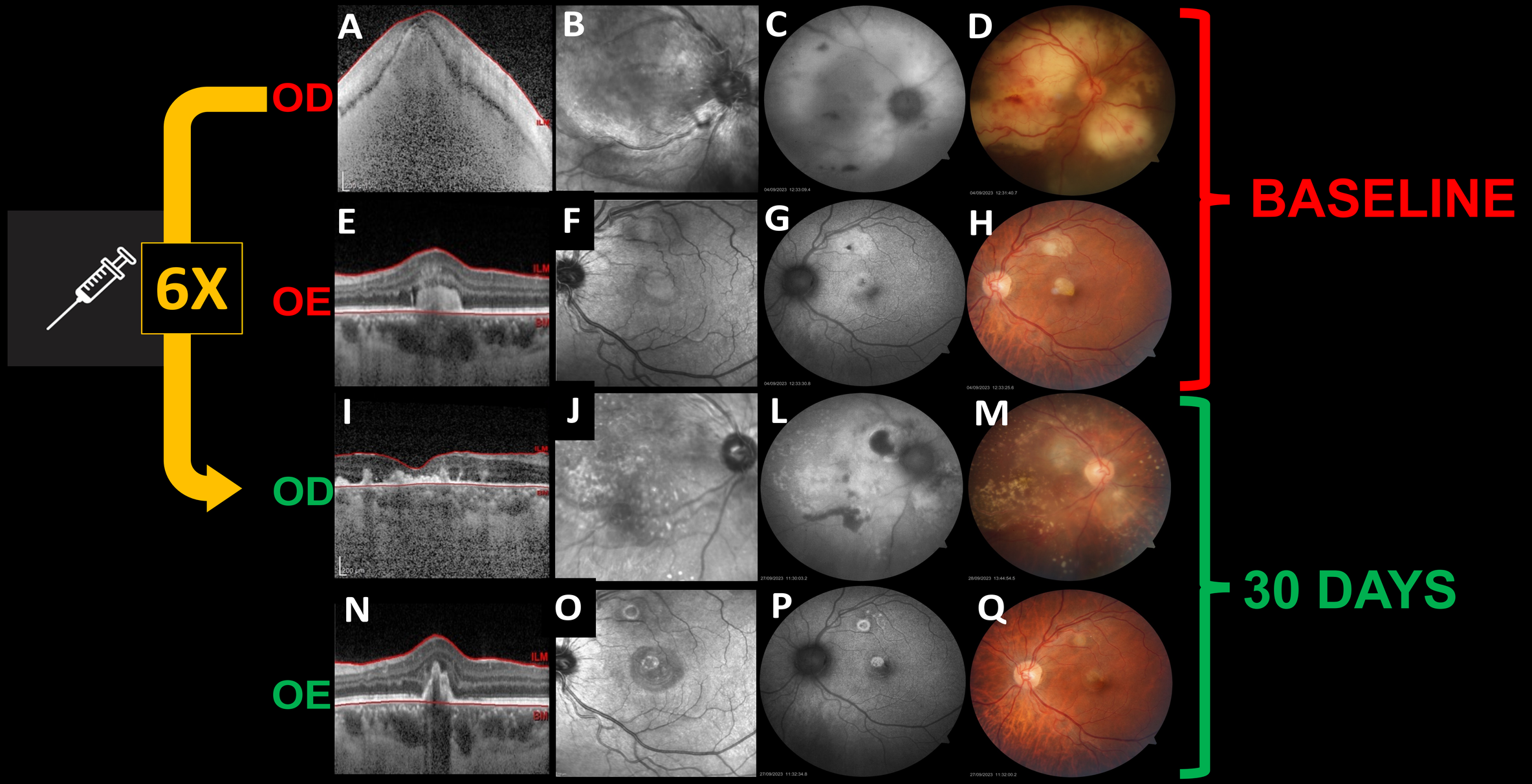
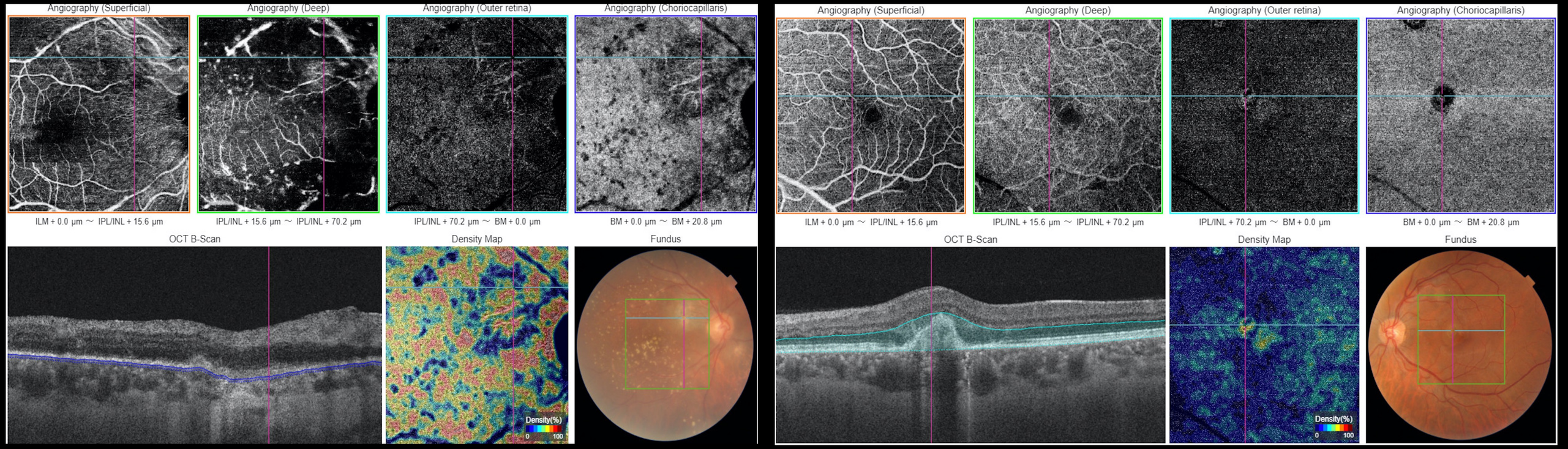


Figure 4: OCTA. Right eye showing deep capillary plexus irregularities and left eye depicts a vascularized PED (quiescent choroid neovascular membrane).



RESULTS: There was a significant reduction in yellowish subretinal lesions with a little improvement in visual acuity after methotrexate intraocular injections. The OCTA and B-scan SD-OCT corroborate to the low BCVA results, showing DCP damaging and ORL atrophy, respectively. The left eye keep in monitoring for the vascularized PED as it may be develop into a active choroid neovascular membrane in future and would be treat with anti-VEGF intraocular injection.

DISCUSSION: We describe a rare presentation of PVRL in immunocompromised patients with HIV/AIDS who presented a therapeutic response to the use of intravitreal methotrexate therapy. The immunocompromised patient with non-specific presentation on fundus examination represents a diagnostic challenge due to the numerous possibilities of opportunistic infections and their variable presentations.

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