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A MULTIMODAL ANALYSIS OF RETINAL ARTERIOLAR EMBOLI

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Purpose

To present a case of a retinal arteriolar embolization and the importance of multimodal analysis in the recognition of the disease, as well as for the prevention and screening of cardiovascular disease.

Case Report

A 65-years-old, female, presented with a 4 month history of sudden vision loss in her left eye. She had epilepsy and denied other systemic diseases or prior surgical procedure. Best corrected visual acuity was 20/20 in the right eye and 20/40 in the left eye. Anterior segment and intraocular pressure were normal. Fundus examination of the left eye revealed a yellow arteriolar plaque located in the macula and adjacent retinal telangiectasia. Few small and hard drusen were found in both eyes (Figure1). Optical Coherence Tomography showed multiple foveal cavitations and intraretinal hyperreflective dots in the left eye (Figure 3). Inferior foveal telangiectatic vessels and late staining were observed at fluorescein angiography (Figure 2). OCT Angiography depicted a flow void area in superficial and deep vascular plexus (Figure 4). Based on clinical history and ophthalmological examination, the hypothesis of a retinal arteriolar emboli was confirmed. An echocardiogram and a carotid doppler ultrasonography were requested. The patient was also referred to cardiovascular evaluation and maintain regular follow up.

Discussion

Arterial retinal occlusion may present with typical findings on fundoscopy. However, embolization of small branches can be difficult to recognize by routine ophthalmic examination, requiring ancillary tests for a definitive diagnosis. In the present case, multimodal analysis was of great importance for etiological elucidation, as well as for screening of cardiovascular disease. Once retinal arteriolar occlusions are associated with increased risk of cerebrovascular events, its recognition is essential to prevent them.



Figure 1. Fundoscopic examination showing foveal telangiectatic vessels in the left eye and drusen in both eyes.

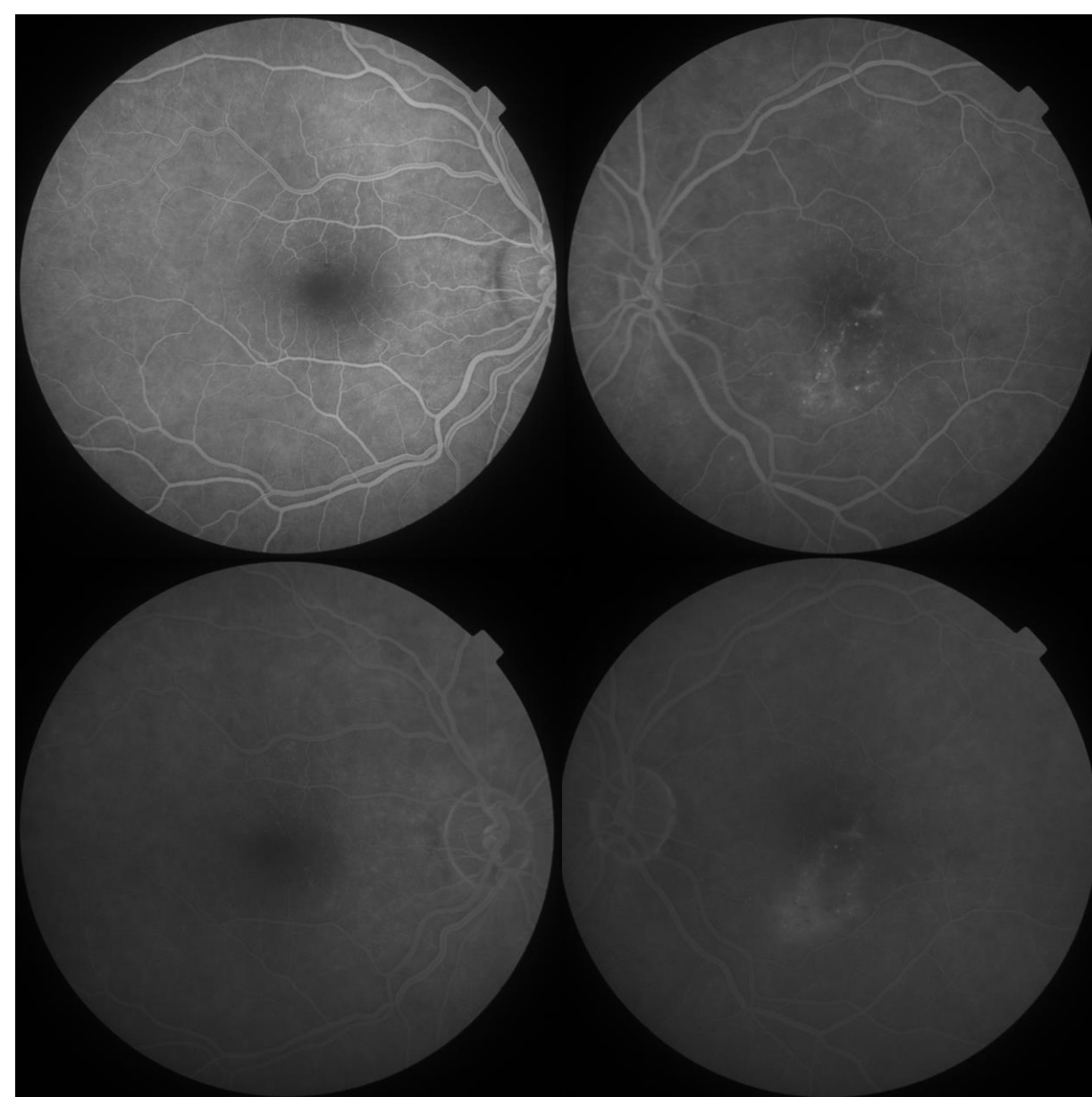


Figure 2. Early (above) and late phase (below) angiogram. Inferior foveal telangiectatic vessels and late staining were observed in the left eye and punctate dots of hyperfluorescence in the right eye corresponding to drusen.

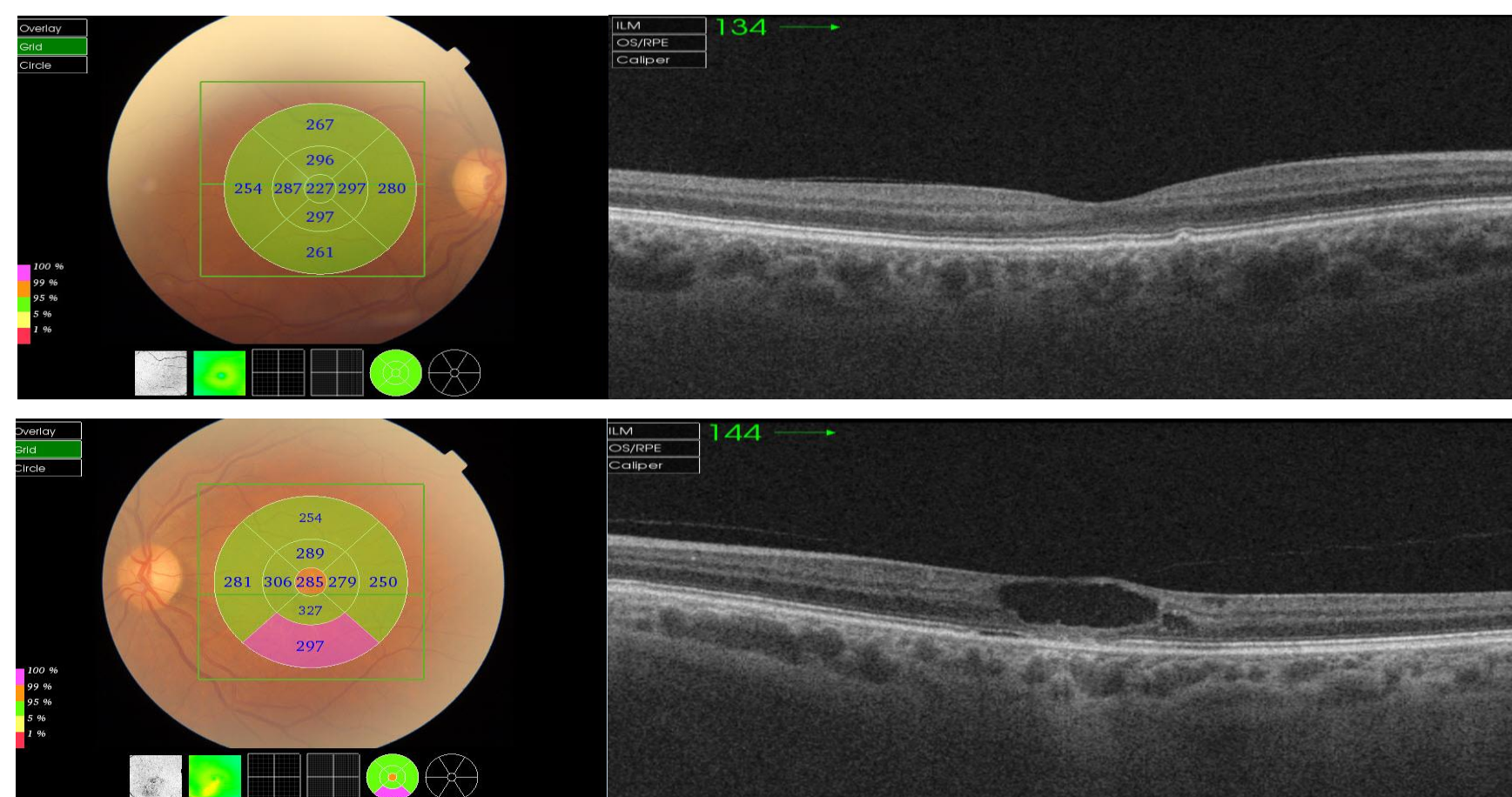


Figure 3. DRI-OCT showed foveal cavitations and intraretinal hyperreflective dots in the left eye.

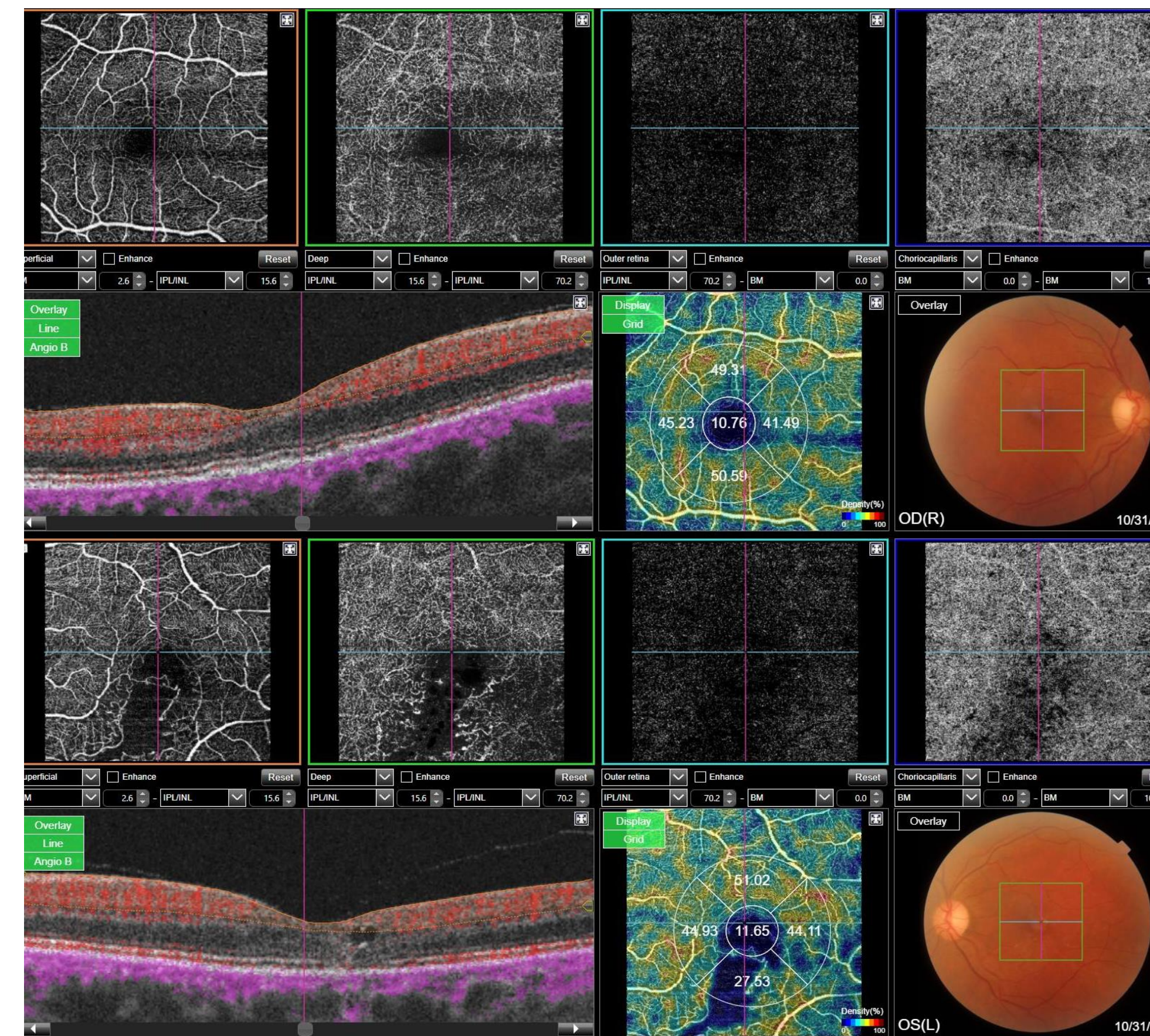


Figure 4 OCT Angiography 4x4 mm revealed a flow void area in superficial and deep vascular plexus of the left eye and unremarkable findings in the right eye.

References

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