Teaching *NeuroImages*: Sonographic “retrobulbar spot sign” in differentiating etiologies of sudden visual loss

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Figure Sonographic findings in a patient with embolic central retinal artery occlusion

(A) Hyperechogenic retrobulbar spot sign in the optic nerve head represents embolus in the distal central retinal artery (CRA) (arrow). (B) Triplex mode demonstrates reduced flow in the affected and partially recanalized CRA. (C, D) Corresponding examinations of the unaffected eye with regular findings.

A 61-year-old vascular patient presented with headache and subacute blindness in the left eye. Remaining American College of Rheumatology criteria were negative. Sonography of the temporal artery revealed no halo sign, but due to low sensitivity, vasculitis could not be excluded.¹ Transorbital examination revealed hyperechogenic retrobulbar spot sign (figure), which is highly specific for embolic occlusion of the central retinal artery.² Comprehensive diagnostic workup revealed paroxysmal atrial fibrillation as a putative cause for the embolus and no evidence for vasculitis. Thus, potentially harmful thrombogenic administration of steroids could be avoided. Transorbital sonography may help in cases of sudden visual loss of unclear etiology.

AUTHOR CONTRIBUTIONS

Simon Faissner: drafting/revising the manuscript, analysis or interpretation of data, acquisition of data. Christine Grunwald: revising the

manuscript, analysis or interpretation of data. Saskia H. Meves: revising the manuscript, analysis or interpretation of data. Ralf Gold: revising the manuscript, analysis or interpretation of data. Christos Krogias: drafting/revising the manuscript, analysis or interpretation of data, study concept or design, study supervision. All authors have read and approved the content of the manuscript.

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