

IMAGING CHARACTERIZATION OF THE FELLOW EYE IN PATIENTS WITH UNILATERAL POLYPOIDAL CHOROIDAL VASCULOPATHY

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INTRODUCTION: New insights on polypoidal choroidal vasculopathy (PCV) have shed light regarding its pathophysiology and associations. However, PCV characterization is still incomplete in Caucasians, which is due to presumed lower prevalence in this population. Features typically associated to AMD such as drusen, retinal pigmentary changes or atrophy are seen in PCV, as precursors and in the fellow eye. Pachychoroid spectrum, predisposing to PCV, also presents with chronic changes in the retinal pigment epithelium (RPE), such as drusen-like deposits (DLD), and in the choroid. The purpose of this study is to perform a multimodal imaging characterization of unaffected fellow eyes in a sample of Caucasian patients with unilateral PCV.

METHODS: Multicenter, retrospective cohort study of unaffected fellow eyes from unilateral PCV patients. Baseline color fundus photography, spectral domain optical coherence tomography (SD-OCT), fluorescein angiography and indocyanine green angiography (ICGA) were assessed in a multimodal scope. The SD-OCT of the last follow-up visit was also evaluated.

RESULTS: Fifty-five patients (median age, 74±15 years) were included. After 15.5±6.4 months of follow-up only one developed disease (1.9%). Soft and/or hard drusen were present in 60% and pachydrusen in 23.6%. Pachychoroid signs were present in 47.2%, the double layer sign in 36.4%, disruption of the RPE changes in 16.4% and RPE atrophy in 10.9%. ICGA revealed choroidal vascular dilation in 63.6% and punctiform hyperfluorescence in 52.7%. Branching vascular networks were identified in only 1.9% of cases.

CONCLUSIONS: The pachychoroid signs in the OCT and ICGA were present in more than half of the cases and the double layer sign in more than a third. These findings are very relevant for improved characterization of this pathology and understanding of its pathogenesis, as well as the ability to translate different phases of its progression.