Hemorrhagic Bacillary Layer Detachment in Macular Telangiectasia Type 2

Macular telangiectasia Type 2 (MacTel 2) is a bilateral disease characterized by neurodegenerative and vascular changes affecting the fovea.\(^1\) The occurrence of subretinal neovascularization in MacTel 2 is rather rare but constitutes a vision-threatening complication.\(^2\) We describe longitudinal multimodal imaging features of a novel variant of bacillary layer detachment (BLD, outer retinal split at the level of the hyporefractive myoid zone)\(^3\) and termed “hemorrhagic BLD” in a case of subretinal neovascularization associated with MacTel 2. This report followed the tenets of the Declaration of Helsinki.

A 55-year-old woman presented with proliferative MacTel 2. Fundus photography showed active yellowish neovascular membrane with subretinal hemorrhages (Figure 1A). Optical coherence tomography (OCT) angiography segmented at the level of the outer retina confirmed subretinal neovascularization (Figure 1B). Optical coherence tomography
disclosed a parafoveal outer retinal cyst consistent with BLD and adjacent subretinal fluid (Figure 1, C–E). The higher optical intensity in the BLD compared with that of subretinal fluid and its colocalization with subretinal hemorrhage on fundus photography suggested heme accumulation in the BLD. Eye-tracked follow-up OCT performed one month after a single intravitreal injection of ranibizumab (0.5 mg/0.05 mL) demonstrated significant regression of the BLD (Figure 1, F and G). Persistent focal attenuations of the ellipsoid and interdigitation zones were noted.

To the best of our knowledge, hemorrhagic BLD has not been associated with proliferative MacTel 2, although similar findings coined “atypical outer retinal fluid accumulation” have been reported in neovascular age-related macular degeneration. Intense leakage of fluid from the subretinal neovascularization and modulation of the adherence between photoreceptor outer segments and retinal pigment epithelium by the subretinal hemorrhage may have induced BLD development. In fact, fibrin interdigitation between photoreceptor outer segments has been documented after experimental subretinal hemorrhages and may explain the presumed photoreceptor fracture under hydrostatic pressure effect.

Key words: MacTel, macular telangiectasia, multimodal imaging, optical coherence tomography, subretinal fluid, subretinal hemorrhage.

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