SS OCT-Angiography in RAP lesions

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Retinal angiomatous proliferation (RAP) or type 3 neovascularization is a subtype of age-related macular degeneration (AMD) characterized by intraretinal new vessels that can penetrate in the subretinal space and in the subretinal pigment epithelium (RPE) space later on. Currently, multimodal imaging including fluorescein angiography, indocyanine green angiography and cross-sectional optical coherence tomography (OCT) offers well-defined clinical findings for the diagnosis of RAP lesions.

Swept-source (SS) OCT allows an accurate analysis of the choroid due to the longer wavelength used in comparison with spectral-domain (SD) OCT. This is specially important in RAP lesions in which the choroid is thinner compared with other AMD subtypes. In addtition, the typical RAP findings consisting of RPE detachment, intraretinal cysts, drusen and hyperreflective dots can be easily identified with SS-OCT.

OCT angiography (A) is capable of demonstrating flow in early cases of RAP. Moreover, OCT-A is capable of quantifying a flow reduction following intravitreal therapy. These findings are more apparent in the deep retinal plexus of the OCT-A. On the other hand, in some cases neovascularization is clearly shown in the outer retina of the OCT-A. Likewise, a reduction in the lesion area can be monitored with OCT-A following intravitreal therapy.