

Diagnosis and follow-up of CNV using OCT-A

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This Swept source dye-free angiography is a transformative approach imaging ocular vessels based on flow, not simple reflectance intensity. It allows both 3D visualization, and Retinal and choroidal structures perfusion. Full spectrum amplitude decorrelation need detecting motion contrast based on detection of speckle or intensity changes in OCT structural images. Standard Fluorescein Angiography gives normal retinal vessels. OCTA shows SCP and DCP with qualitative and quantitative signs. All vessels are hyper intense on these plexuses. Bellow RPE («shield effect»): OCT-A shows that all choroïdal vessels are hypo intense.

We have now new 5 signs active criteria versus quiescent criteria of activity for NVC.

SHAPE: “Lacy-wheel” (or sea-fan) shape Vs long filamentous linear vessels

BRANCHING PATTERN: Tiny vessels Vs large trunks

ANASTOMOSES: Presence of anastomoses and loops Vs Absence of them

VESSEL'S TERMINI: Peripheral Arcade Vs “Dead tree” aspect

PERILESIONAL HYPOINTENSE HALO: Presence Vs Absence

we consider that no re treatment was needed that Five criteria of quiescence (No well-defined shape, No branching, No Anastomosis, Dead tree » aspect , No Perilesional Halo)

Moreover, Hemorrhages are only visible on the color picture and Fluid is visible on OCT-B and FA, which are included in Triton swept source OCT-A.

Structural and high resolution OCT-B is mandatory to identify exudative reaction and ICG-A to have the exact total CNV extension. The hyper-flow signal corresponding to active CNV, is obtained fastly, easily and without dye. The type of CNV will be analysed and detectable on a different segmentations.

Swept source OCT-A is a useful technology for non-invasive monitoring of the eAMD because both functional (blood flow) and morphological (fluid accumulation) information is provided from a single scan. Such simultaneous monitoring, based both on OCT-A Activity Criteria and structural OCT findings, may help in the diagnosis of CNV, guiding decisions for treatment, as well as in monitoring the evolution of CNV and its response to treatment.