Optical coherence tomography (OCT)

OCT imaging is an important tool in the diagnosis of RAP.

Stage I and II lesions are often associated with a focal hyperreflective area located in the deep retina (intraretinal neovascularization), as well as being often associated with intraretinal fluid with cystic spaces, subretinal fluid and PED (Fig. 4).

In stage III lesions, neovascular proliferation associated with PED may be observed.

With time-domain OCT[20,21], (TD-OCT) a typical pattern of structural changes in RAP may be observed, characterized by increased foveal thickness, cystoid macular oedema (CME) mainly located in outer retinal layers, serous retinal detachment and a highly reflective intraretinal mass overlying a highly or moderately elevated retinal pigment epithelium.

This mass corresponds to the hot spot observed in ICG angiography.

With Fourier-domain OCT (TD-OCT) it is possible to obtain unprecedented in vivo detail of the anatomy of RAP lesions, with images nearly resembling histological specimens.

OCT findings may vary with the stage of the disease and type of early neovascularization, including[22,23] areas of intraretinal neovascularization (IRN) in the deep retina, adjacent to PED, anterior and posterior neovascular proliferation through a break in the RPE, intact and ruptured portions of Bruch’s membrane, subretinal fluid and subretinal and/or sub-RPE neovascular membranes (Fig. 5).

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