Drusen and RPE abnormalities

The majority of patients with AMD have drusen and RPE abnormalities with no significant visual loss.

FA is not usually indicated in these cases unless we suspect the presence of choroidal neovascularization (CNV).

Several types of drusen can be identified. Hard drusen are small (<63 µm), round, well-defined, yellowish deposits that correspond to accumulation of hyaline material in the inner and outer collagenous zones of Bruch's membrane.

On FA, they appear hyperfluorescent as transmission defects due to overlying RPE thinning[(6)].

On occasion there may be a myriad of small drusen, termed cuticular or basal laminar drusen, which appear as a "starry sky" on FA (Fig. 1).

Soft drusen are larger (>63 µm) with poorly defined borders and they tend to coalesce and become confluent.

Their angiographic appearance depends on the thinning of the overlying RPE, the histochemical composition and the age of the patient.

They are hyperfluorescent with phospholipid accumulation and in younger patients[(7)].

Soft drusen represent localized detachments of the RPE.

It is very usual to find both hard and soft drusen in the same eye of a patient (Fig. 2).

The confluence of soft drusen can produce a drusenoid pigment epithelial detachment (PED), which shows hyperfluorescence and dye pooling without leakage beyond its margin with typical areas of focal hyperpigmentation (Fig. 3).

In addition to drusen we can find RPE abnormalities, namely hyperpigmentation.

Focal hyperpigmentation is a risk factor for the development of choroidal neovascularization (CNV) and angiographically appears as a blocked fluorescence (Fig. 4) .

Histopathologically it is characterized by focal RPE hypertrophy and pigment migration into the subretinal space.

It also displays focal hyperautofluorescence suggesting that these cells contain lipofuscin [(8)].

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