

Fundus Autofluorescence, Optical Coherence Tomography, and Electroretinogram Findings in Choroidal Sclerosis

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Purpose:

To describe fundus autofluorescence, optical coherence tomography, and electroretinogram findings in choroidal sclerosis.

Methods:

Retrospective case series. Six eyes of three patients with choroidal sclerosis were evaluated with fundus autofluorescence, optical coherence tomography, and electroretinogram testing.

Results:

In all six eyes, fundus autofluorescence imaging revealed hypofluorescent placoid lesions corresponding to areas of chorioretinal atrophy seen on stereo biomicroscopy. Prominent hyperfluorescent choroidal vessels underlying regions of atrophic disease were observed in all eyes. In two eyes, fundus autofluorescence revealed punctate hypofluorescent lesions in the fovea that were not visualized on biomicroscopy. In one eye, fundus autofluorescence identified a central island of preserved retinal pigment epithelium that was not appreciated on funduscopic examination. Optical coherence imaging was significant for increased signals reflected from choroidal structures in all patients with loss of choroidal fine tubular structures. Full-field electroretinogram testing demonstrated generalized rod-cone dysfunction with a lower b- to a- wave ratio.

Conclusion:

Fundus autofluorescence and optical coherence tomography are noninvasive diagnostic adjunct that can aid in the diagnosis of choroidal sclerosis. Fundus autofluorescence may be a more sensitive marker of disease extent and progression than clinical exam alone. Electroretinogram testing can result in an electronegative maximal response.