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Service (sector) Retina and Vitreous N° CEP

### **THIRd-GENERATION OPTICAL Coherence Tomography (OCT 3) in High Myopia**

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**Purpose:** To evaluate the retinal morphology of highly myopic eyes using third-generation optical coherence tomography (OCT 3).

**Methods:** Observational case series. 42 highly myopic eyes (mean axial length  $\pm$  SD,  $29.93 \pm 2.43$ ; mean visual acuity (VA), 20/80; range, 20/20 to counting fingers at 2 feet) of 26 patients were studied using OCT 3. Twelve optical coherence tomograms of 6 mm in length were obtained in a radial spoke pattern centered on the central fovea in each eye. Retinal thickness was measured at the central fovea using manual caliper-assisted technique.

**Results:** OCT 3 was able to detect full-thickness macular hole in one eye, peripapillary retinoschisis in four eyes and macular retinoschisis in 2 eyes. These findings were not noted by fundus biomicroscopy. Mean retinal thickness  $\pm$  SD was  $186.7 \pm 31.7$ . The reduced retinal thickness was significantly correlated with reduced levels of VA ( $r = -0.37$ ;  $p = 0.03$ ), as well as with increased axial length ( $r = -0.41$ ;  $p = 0.16$ ).

**Conclusion:** OCT 3 appears to be a useful tool in the diagnosis of macular disorders associated with high myopia. In our study, OCT 3 was able to detect subclinical changes involving the macula in 16% of the studied eyes. The retinal thickness may be lower in highly myopic eyes with higher axial length measurements and lower levels of VA.