

R1 R2 R3 PG0 PG1 Estagiário Tecnólogo
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Service (sector) Retina and Vitreous N° CEP 1474/05

Optical Coherence Tomography in Retinitis Pigmentosa Patients

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Purpose: To determine optical coherence tomography (OCT) results (retinal nervous fiber layer – RNFL – and retinal thickness) in retinitis pigmentosa (RP) patients and a possible correlation with visual acuity. **Methods:** This study was approved by the UNIFESP medical research ethical committee. Thirty-one eyes from 16 RP patients were included. 15 healthy eyes were included as a control group. OCT (Fast RNFL Thickness Scan 3,4mm protocol) scans, complete eye exam and electrophysiological tests (full-field electroretinogram and dark adaptation threshold test) were performed. The OCT scans were analyzed manually using the caliper under the RNFL thickness single eye protocol. Statistical analysis was performed (Newman-Keuls multiple comparison test, student t-test and Pearson correlation) with the SPSS version 12.0 software. **Results:** The electroretinogram confirmed RP diagnosis in the studied patients. Visual acuity ranged from 20/20 to hands motion. Retinitis pigmentosa eyes presented nasal quadrant retinal nervous fiber layer (RNFL) and retinal thickness thinner than the other quadrants ($p < 0.001$). There was a moderate statistical correlation between visual acuity and the temporal retinal thickness ($r = 0.437$; $p = 0.037$). When comparing retinitis pigmentosa patients to the control group, RNFL and retina were thinner in RP eyes in all quadrants except the temporal where both mean RNFL and retina were thicker in RP patients. **Conclusions:** RP eyes showed thinner retina and RNFL than control eyes in the nasal, superior and inferior quadrants. This finding was possibly due to the loss of retinal cells in this progressive degeneration. Temporal retina and RNFL were unexpectedly thinner in control eyes. A large series may show a stronger correlation between visual acuity and temporal retinal and RNFL thickness.