Evaluation of retina with optical coherence tomography in patients with retinitis pigmentosa

Oner A et al.
Erciyes University Medical Faculty, Ophthalmology Department
Kayseri-TURKEY

Purpose

- Evaluation of the relationship between macular optical coherence tomography (OCT) parameters with visual functions in patients with retinitis pigmentosa (RP).

Material and Method

- One hundred and fifty-three eyes of 79 patients were included into the study.
- Mean visual acuity of the patients were converted to logMAR values.
- Integrity of the outer retinal layers, presence of cystoid macular edema (CME) and vitreoretinal surface abnormalities were evaluated, and central macular thickness (CMT) was calculated with OCT.

Results

- Mean visual acuity was 1.2 ± 0.9 logMAR.
- Mean CMT was 199.95±149.47 µm in RP group. This value was 316.82 ± 208.35 µm in cases with CME, and 179.27 ± 126.70 µm when cases with CME were withdrawn.
- There was a negative correlation between the patients' ages and visual acuities with their CMT.
- Twelve of the eyes (8%) had epiretinal membrane while 9 eyes (6%) had macular hole.
- All patients had disintegrity of outer retinal layers of varying degrees.

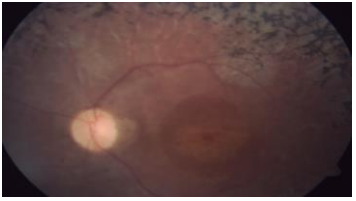

Figure 1

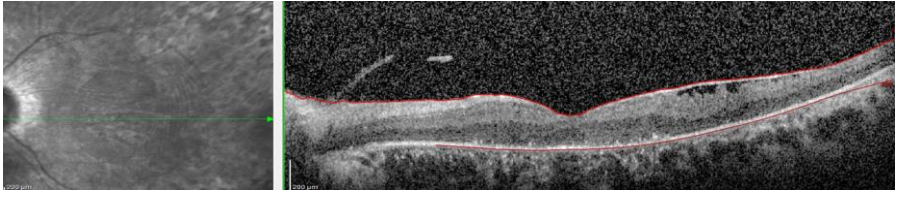

Figure 2

Figure 1: Color fundus photograph of one patient.
Figure 2: OCT of the same patient shows epiretinal membrane and disintegrity of outer retinal layers.

Conclusion

- With the aging and progression of the disease, visual acuity tend to decrease, central macula thins and disintegrity in the outer retinal layers increases.
- Patients have a significant correlation between OCT changes and visual functions.
- Optical coherence tomography is very helpful in determining retinal structure, morphological abnormalities and assessing the prognosis in patients with RP.