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IDIOPATHIC GLAUCOMA

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BACKGROUND

A 45 year-old male suffered an idiopathic increase in intraocular pressure (IOP) O.D. during March 2017, which resulted in a loss of almost the entire visual field O.D. The IOP O.D. was 31 mm/Hg, and O.S. was 18 mm/Hg.

The patient was prescribed ocular medications to reduce the IOP, which stabilized at 21 mm/Hg.

CASE SUMMARY

The patient was first examined on June 29, 2017, and had no remarkable vision or health history, other than the glaucoma attack.

Except for visual fields visual acuity O.D. and other measures of vision function O.D. were not possible due to the loss of the visual field and poor fixation.

Upon visual field examination O.D., only a four inch square (16 square inches) of vision was measured in the superior-temporal visual field accompanied with scattered scotomatous areas. A program of vision rehabilitation was instituted using the Zone-Trac®.

The treatment protocol was three 45 second sessions with a three minute rest in between sessions, which was repeated for a total of three cycles.

Following the first therapy session, the visual field O.D. was measured again and had increased to a five inch by six inch rectangle (30 square inches) also with scattered scotomatous areas (see Figure 1).

CASE SUMMARY (continued)

After five more therapy sessions, the area of the visual field had increased to an 11 by 11 square (121 square inches) without the scattered scotomatous areas (see Figure 2).

DISCUSSION

After the initial evaluation, the patient's recent eye care records were obtained.

The diagnosis at that time, May 19, 2017, was O.D. branch retinal vein occlusion, uveitic glaucoma, and chronic iridocyclitis (see Figure 3).

He was prescribed O.D. Latanoprost at bedtime, and prednisolone four times a day. His current medication is O.D. Latanoprost, Dorzolamide-timolol twice a day, and prednisolone once a day.

Uveitis is a possible cause for the branch retinal artery occlusion as reported by Kahloun et al. (2013); the uveitis also being the etiological factor in the glaucoma.

A reasonable cause of the uveitis is the chronic iridocyclitis, which is idiopathic.

In regard to the vision therapy, it has been previously reported that biofeedback of accommodation stimulates the hypothalamus, which in turn causes an increase in the Alpha Brain Wave (ABW).

In an enhanced ABW state all functions of vision in the eye and brain are optimised. Additionally, the hypothalamus controls the immune system and the neuropolypeptides, which are essential for any nervous system repair.

VISUAL FIELD TESTS

Figure 1

6/29/17

Figure 2

8/5/17

OPTICAL COHERENCE TOMOGRAPHY

Figure 3

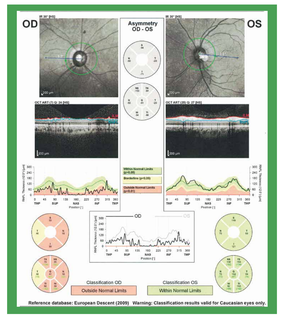
Optical Coherence Tomography (OCT) is designed to produce an image of a cross section of the retina.

As can be noted by comparing O.D. and O.S. with established norms, O.D.has a thinner retina, and an ill-defined macula.

The thin macula can explain his poor visual acuity and lack of having central fixation.

Regarding the peripheral retina, the right visual field has close to normal thickness, where he has vision as measured by perimetry.

Figure 3



10/20/17

DISCUSSION (continued)

Another possible cause of the vision defects is the methylenetetrahydrofolate (MTHFR) genetic mutation.

This mutation has been related to retinal vessel occlusions, which may have been a predisposition for the branch retinal artery occlusion.

Patients with the MTHFR mutation are prone to inflammatory bowel disease, which in turn has been associated with uveitis.

DISCLOSURE

The author is the president of Elite Performance and Learning Center, PS, the manufacturer of the Zone-Trac®.

SOURCES

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