New techniques make us look forward

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This case illustrates how unexplained visual complaints were eventually understood through wave-front technology. A 41-year-old man presented to our clinic with monocular diplopia. Ophthalmic examination showed no abnormality; especially cornea and lens appeared to be completely clear. Adjustment of the refraction did not diminish the complaints, visual acuity of the right eye with refraction S-2.50 C-1.00 x 155 was 20/50, with pinhole 20/25. Visual field analysis, corneal topography (Orbscan) and ocular coherence tomography (OCT) showed no abnormality. The analysis of the wave-front (I-Tracey) showed higher internal aberrations. Total higher aberrations were 0.498μ (with 0.413μ coma), corneal 0.185 μ (with 0.067 μ coma) and internal 0.510μ (with 0.375μ coma). Three months after the first examination a second ophthalmic examination was performed. This showed a mild cortical cataract and nuclear sclerosis with a more myopic refraction. After cataract surgery the patient observed no monocular diplopia anymore and the visual acuity rose to 20/12 after refraction. This case report shows how wave-front technology was able to diagnose the origin of visual complaints in the crystalline lens and give an indication of a beginning cataract, before a routine ophthalmic exam with the slit lamp did. In literature it is described how findings with slit lamp examination are not always sufficiently matching subjective complaints. Sometimes it is doubted whether the presence of (mild) cataract or some slight lenticular opacifications are an adequate explanation for the visual disturbances. The I-Tracey proves to be a helpful addition to the currently available clinical diagnostic tools.

Biography

Ivanka J E van der Meulen, MD, PhD has completed her PhD about straylight in ocular anterior segment disorders from the University of Amsterdam, the Netherlands. Currently, she continues several research projects concerning aspects of quality of vision in patients with corneal problems, cataract and pseudophakia. She works in the Academic Medical Center in Amsterdam, the Netherlands as a Consultant Ophthalmic Surgeon with cornea, external diseases and cataract as areas of interest.

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