the Ophthalmologist™

Navigating Glaucoma

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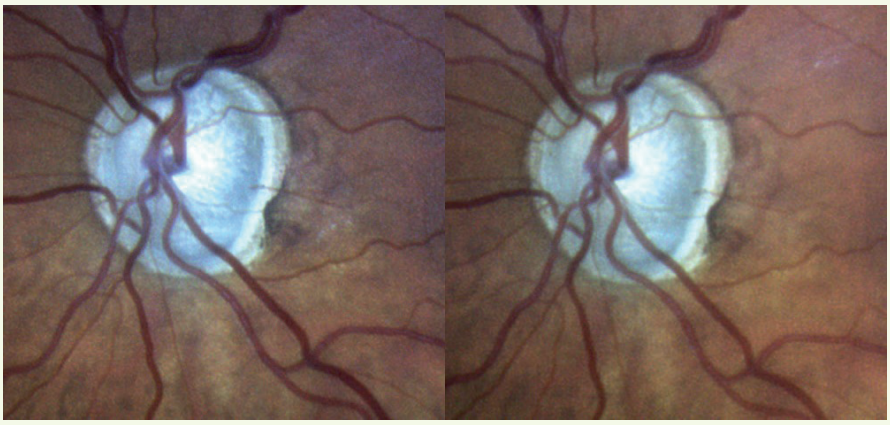

High-tech imaging modalities may be all the rage, but don't forget the advantages – and longevity – of stereophotographic ONH imaging.

What are the main features of COMPASS?

Uniquely, COMPASS provides both confocal scanning ophthalmoscopy and automated perimetry capabilities in a single device. The combination offers significant advantages in the clinic: a single procedure yields both functional (quantitative) and anatomical (qualitative) information. Clearly, this is faster than doing such tests in series. Further, these data are of very high quality. The COMPASS real-time fundus tracker compensates for patients' face and eye movements by rapidly repositioning perimetric stimuli based on the current eye position. Finally, the instrument is fully automated, which minimizes the need for operator intervention; for example, the computer autonomously compensates for refractive error. Overall, COMPASS is designed to provide more and better information, in less time, and in a less onerous manner.

How do these features benefit glaucoma management?

As glaucoma is a progressive disease that affects the structure and the function of the optic nerve, we need both structural and functional information to accurately diagnose and monitor patient disease states. The COMPASS retinal tracking system permits more accurate correlation of functional measurements (retinal threshold sensitivity values) with retinal structure (fundus images). This greater accuracy is aimed at reducing test-retest variability, which in turn will mean that fewer tests will be required for the physician to confidently assess disease progression.

Furthermore, COMPASS' capabilities, together with other clinical information, facilitate the recognition of non-glaucoma retinal pathologies that could affect visual field, including pathological myopia changes, retinal scars and maculopathies. In such cases, the new technology considerably simplifies the differential diagnosis task faced by the clinician.

Finally, note that COMPASS provides high-quality, automatically acquired, confocal, high-definition, true-color stereophotographs of the optic nerve head (ONH). As glaucoma is associated with ONH changes, ONH evaluation is critical to diagnosis and monitoring. This aspect of COMPASS technology can be considered future-proofed: 30 years from now, the images COMPASS provides will still be useful in clinical settings, to identify structural changes over time. This may be considered an advantage in an era characterized by early obsolescence of imaging devices.

Will the patient notice a difference?

Given that COMPASS can help reduce the variability seen with functional tests, it holds the potential to improve the sensitivity of detecting progression. And if we are more confident about our assessments of progression, we may be able to provide better care for the patient. The benefit to patients' quality of life is clear.

What impact has COMPASS had on your practice?

Primarily, it aided our diagnostic process: the retinal tracker, which is the real heart of the FAP system, is designed to significantly reduce test-retest variability and improve the sensitivity of disease monitoring. Having a high-tech perimeter coupled to a confocal retinography system that can automatically produce high-quality, confocal, true-color, optic disc stereophotographs at the end of a perimetric test is a unique combination and is a great aid in my clinical life. Overall, these two key features of COMPASS make life easier for both operator and patient, and I hope that the results from ongoing multicenter clinical trials will provide evidence to make COMPASS the gold standard for functional testing in glaucoma.