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The importance of intraocular pressure (IOP) as a predictive factor for the onset and progression of glaucoma[1–5] has been unquestionably established. At the current time, IOP actually can only be 'estimated' *in vivo* and our measurement estimates are subject to variability related not only to inherent inaccuracy of commonly available tonometric measurement devices, but also to the circadian and long-term IOP fluctuation.[6,7] The simple statement that 'IOP is important' is not enough. The more relevant question is: which IOP parameter (peak, mean or fluctuation) matters the most?

Evidence from recent large retrospective[8] and prospective[9] cohort studies, supported by the Collaborative Initial Glaucoma Treatment Study (CIGTS),[10] has pointed towards a more prominent role of peak IOP. Given that the level of evidence currently supports peak IOP as the most relevant IOP parameter for the prediction of visual field (VF) progression, it is important to focus on how to detect these peaks. The aforementioned studies were based on clinic hour measurements, which are known to miss over 60 % of the IOP peaks occurring over a 24-hour period.[11] An alternative has been to perform measurements at different times of the day to detect peaks and evaluate the efficacy of therapy. However, modified diurnal curves (usually performed between 8 am and 4 pm) miss over 30 % of the IOP peaks.[12] Full 24-hour diurnal curves are time-consuming, costly and often unfeasible for most clinicians. New technologies allowing continuous IOP monitoring are yet to be validated, but are expected to be expensive and impossible to perform on a large scale.[13] The water-drinking test (WDT) was first described as a diagnostic tool for glaucoma, being later abandoned due to its poor diagnostic accuracy.[14] This test has gained significant interest in recent years, since different studies have shown its use as a surrogate for detecting patients who have IOP peaks undetected during regular clinic hours.

No longer used to diagnose glaucoma but rather to detect IOP peaks, the reliability and validity of the WDT has been confirmed by studies from different groups of investigators.[15–18] The ingestion of 800 to 1,000 ml of water stresses the outflow facility of the eye's drainage system[19] and theoretically replicates what physiologically happens during the day.[6] Hence, the IOP peaks detected during the WDT correlate and agree with the peaks occurring outside clinic hours.[15–17]

The implications of having an inexpensive and safe tool for clinical practice are remarkable, starting with the prevention of peaks that may be leading to progression. In fact, studies have already demonstrated that eyes with higher peaks during the WDT not only have worse VF damage,[20] but are also more likely to present progressive VF loss, despite similar mean IOP during clinic hours.[21]

In summary, we are now able to point to the IOP parameter that really matters in terms of glaucoma progression: the peak. In addition, we have a valid, reliable and feasible tool to detect it: the WDT. Perhaps it is now time to translate this scientific knowledge into reality and improve clinical care. ■

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