



Measuring the intraocular pressure (IOP) not only in sitting, but also in supine position, may help to identify the 24-hour IOP characteristics of your glaucoma patient

The Science behind the Tip

It is well known that each patient has an individual circadian IOP pattern. Studies have shown that up to two thirds of the peak values are found outside office hours¹. IOP measurements seem to be more influenced by the body position than by the time of day: measurements taken in the sitting position do not vary significantly between night and day².

Fogagnolo et al³ postulated that IOP measurements taken in the supine position during office hours could partially imitate the 24-hour IOP characteristics and should be integrated in the diagnostic procedures of glaucoma patients. Knowing the 24-hour IOP pattern of a patient is important because of the effect of long term IOP fluctuation on progression⁴.

References

- 1) Huang R, Ge J, Chen G, et al. Four measures of intraocular pressure fluctuation: which correlates most optimally with actual office-hour readings: *J Glaucoma* 2015; 24 : 550-555.
- 2) Lee Y, Kook N, Joe S et al. Circadian (24-hour) pattern of intraocular pressure and visual field damage in eyes with normal-tension glaucoma. *Invest Ophthalmol Vis Sci* 2012; 55 : 881-887
- 3) Fogagnolo P, Orzalesi N, Ferreras A, Rossetti L. The circadian curve of intraocular pressure: can we estimate its characteristics during office hours? *Invest Ophthalmol Vis Sci* 2009; 50- 2209-2215.
- 4) Caprioli J, Coleman AL. Intraocular pressure fluctuation: a risk factor for visual field progression at low intraocular pressures in the Advanced Glaucoma Intervention Study. *Ophthalmology* 2008; 115:1123-29.