GAT values more discordant than DCT measures in glaucoma

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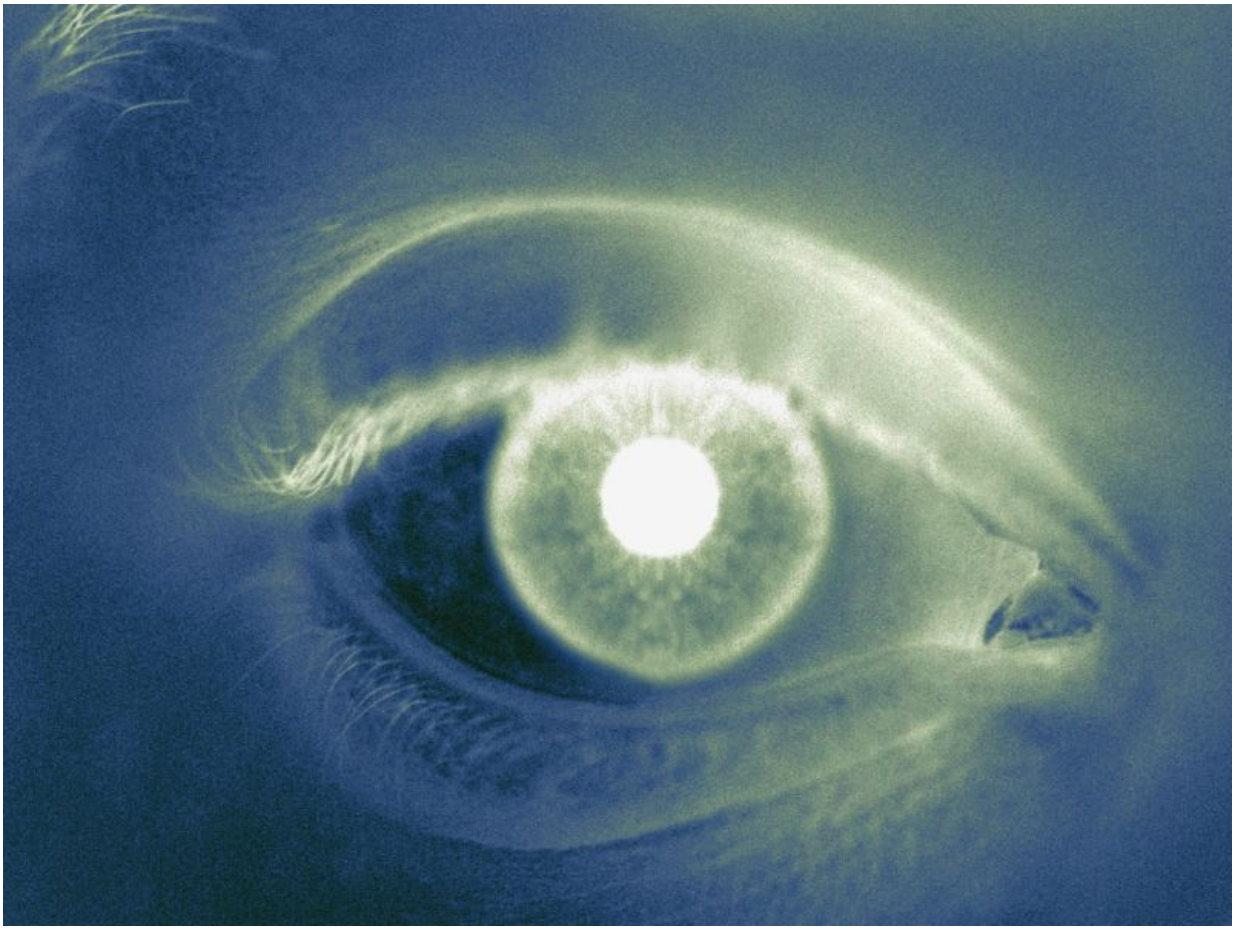

(HealthDay)—Conventional Goldmann applanation tonometry (GAT)

values for intraocular pressure (IOP) are significantly discordant compared with Pascal dynamic contour tonometry (DCT) measurements in patients with thin corneas and advanced glaucoma, according to a study published online May 11 in *JAMA Ophthalmology*.

Josephine Wachtl, from the University Hospital Zurich, and colleagues conducted a prospective cross-sectional case series among 112 white patients with glaucoma. The authors performed IOP measurements with GAT and DCT and examined the difference between corrected and conventional GAT and DCT measurements.

The researchers found that the mean IOP was 20.3 and 17.0 mm Hg as measured by DCT and GAT, respectively, with a mean discordance between measures of −3.3 mmHg. Compared with DCT, the five corrected GAT values ranged from −2.7 to −5.4 mm Hg. The mean result of the Dresdner correction formula was 17.6 mm Hg, which was closer to the DCT than the GAT measurement. There was a mean Glaucoma Severity Score of 4.7. A positive correlation was seen for uncorrected discordance ($IOP_{DCT} - IOP_{GAT}$) with the Glaucoma Severity Score ($r_s = 0.33$), and a negative correlation with central corneal thickness ($r_s = -0.22$).

"Application of GAT-based correction formulas involves a possible risk of creating an even greater number of unpredictable measurement errors," the authors write. "Hence, we advise with caution, especially pertaining to eyes with thin corneas, to not place reliance on GAT readings, and abandon any correction formula."

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