LETTER TO THE EDITOR

Evaluation of Goldmann applanation tonometry, rebound tonometry and dynamic contour tonometry in keratoconus

Dear Editor,

We read with great interest the article by Özcura et al.,

concerning the evaluation of Goldmann applanation

tonometer (GAT), rebound tonometer (RT) and dynamic contour
tonometer (DCT) in patients affected by keratoconus, sug-

gesting that DCT may be the most appropriate tonometer
to use in keratoconus for the measurements of intraocular

pressure (IOP), because DCT does not appear to be depend-

ent upon corneal thickness (CCT) and radius (CR).

This paper confirms previous finding in normal patients,
as Lanza et al. found that DCT showed higher values of IOP,
mainly related to CCT and volume, concluding that, if in the
future DCT should be considered the gold standard, higher
values of IOP could still be considered normal.

In our opinion, in cases of keratoconus the difference
between DCT and GAT could also be related to the corneal
biomechanical changes, such as corneal hysteresis (CH)
and corneal resistance factor (CRF). The same happens
in corneas that underwent refractive surgery, where the
changes in corneal thickness and radius make GAT and IOL
power calculation unreliable.

Moreover in these patients a significant decrease of CH
and CRF immediately after myopic PRK that remains stable
over the follow-up has been described, compared to nor-
mal eyes, in which these parameters have been shown to be
related to the corneal shape and thickness. So these param-
eters could in addition influence the unreliability of GAT,
making the DCT potentially better.

A similar behavior therefore could be present in patients
affected by keratoconus, where CH and CRF changes too

could influence the differences between GAT and DCT,

increasing or decreasing such differences.

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