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Paper Abstracts
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Investigation of a correlation between marginal conjunctival mechanical sensitivity and perceived comfort of soft contact lenses

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Purpose: To determine if the mechanical sensitivity of the marginal conjunctiva is correlated with perceived soft contact lens comfort.
Method: The mechanical sensitivity of the lower marginal conjunctiva of both eyes (40 eyes) of 20 participants was measured using a Cochet-Bonnet aesthesiometer (0.12mm filament diameter). Participants were excluded if they scored six or less on a DEQ-5, had active ocular inflammation, had previous ocular surgery or trauma or had worn contact lenses in the preceding two weeks. The same participants had daily disposable lenses (etafilcon A) applied to their eyes inside out and the correct way around. The order in which the lenses were applied was randomised. Participants did not know the orientation of the lenses in their eyes. The participants rated the comfort of the lenses on a visual analogue scale after the lens had been on-eye for one minute. The researcher facilitating the participants in rating the comfort did not know the participants’ sensitivity measurements or the orientation of the lenses. The difference in comfort score between the inside out lens and the correct way around lens produced a "comfort difference" value for each eye and these values were tested for possible correlation with the sensitivity measurements.
Results: A statistically significant ($p = 0.046$) Pearson correlation coefficient of 0.32 was found.
Conclusions: The correlation found showed a moderate positive correlation between the two variables. Therefore, as the comfort difference increased, so too did sensitivity measurements i.e. participants who found a larger difference in comfort were slightly more likely to have more sensitive marginal conjunctivas. However, the settling time of one minute appears likely to have affected some of the comfort scores irrespective of lens orientation.

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