Letter to the editor

Re: Silicone hydrogel mini-scleral contact lenses in early stage after corneal collagen cross-linking for keratoconus: a retrospective case series

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Editor: Severinsky, Wajnsztajn and Frucht-Pery1 assessed the success of low oxygen transmissibility (Dk/t) lenses in correcting keratoconus after corneal collagen cross-linking. It is unclear from their article why they would pursue this strategy, when there is a wealth of modern contact lens materials available, which offer high Dk/t tolerance to different lens designs, lens power profiles or even patient non-compliance in the form of occasional overnight wear.

The original Holden-Mertz criterion determined that a critical Dk/t value of 24 is required for a lens worn under open-eye conditions to induce zero lens-induced corneal swelling.2 The lenses fitted by the authors were less than half this value.

Studies subsequent3,4 to that of Holden and Mertz2 have reinforced the need for high Dk materials for daily wear, particularly for high-powered lenses and astigmatic designs.5,6 Almost half of all documented contact lens complications relate to hypoxia.7,8

We are fortunate to have an innovative contact lens industry which has shown great leadership with the continual introduction of new high Dk/t lenses, including more recently the miniscleral rigid lenses and the extended range (XR) monthly disposable silicone-hydrogel lenses. Indeed, the proof of the science and research is being demonstrated in current clinical practice. Recent surveys of the contact lens industry have shown that the fitting of modern high Dk/t lenses now exceeds that of the old low Dk lens types.9

REFERENCES