

## NEWS ALERT

### New findings on contact lens-related microbial keratitis

Two papers available online ahead of publication in the American Academy of Ophthalmology's journal *Ophthalmology* report new findings on the incidence of microbial keratitis (MK) in contact lens wearers and risk factors for the disease.

Dart and co-workers describe a 2-year prospective case-control study to assess the relative risks of microbial keratitis for contemporary contact lens types and wearing schedules. Cases were 367 contact lens wearers attending Moorfields Eye Hospital with proven or presumed MK.

Compared with planned replacement soft lenses, the relative risk of MK was significantly increased with daily disposable lenses and differed between different brands of daily disposable lens, was reduced for rigid lenses and no different for silicone hydrogel or other types of soft lens. Although the risk of MK was higher overall among daily disposable lens users, the risk of vision loss was less than for planned replacement soft contact lens users. The relative risk for overnight wear, for any lens type, was 5.4 times higher.

In a companion paper to be published in the same issue, Stapleton and co-workers describe a prospective population-based surveillance study to establish the absolute risk of contact lens-related MK, the incidence of vision loss and risk factors for the disease. They identified 285 new cases presenting in Australia over a 12-month period.

In this study, incidence estimates for soft lens use were similar to those previously reported. New lens types had not reduced the incidence of disease. The annualized incidence per 10,000 wearers was 1.9 in daily wear soft lens wearers, 2.0 in daily disposable lens wearers and 11.9 in daily wear silicone hydrogel wearers. Among daily wearers, after controlling for other risk factors, use of silicone hydrogel contact lenses had a higher but not statistically higher risk of infection than use of hydrogel contact lenses. Overnight use of any lens was associated with a higher risk than daily use. Loss of vision occurred in 0.6 per 10,000 wearers. Risk factors included overnight use, poor storage case hygiene, smoking, internet purchase of lenses, <6 months' wear experience, and higher socioeconomic class.

The risk associated with internet/mail order purchase of lenses was 4.76 times higher than when lenses were bought from an optometrist.

These authors point out that the risk of developing severe MK is greater for planned replacement soft lenses than with daily disposables. An unexpected finding in both studies was that, for a majority of MK cases (moderate and mild), there was either no difference between daily disposable and planned replacement soft lenses (Australian study) or a greater risk (UK study).

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