

Contact Lens Update

CLINICAL INSIGHTS BASED IN CURRENT RESEARCH

Summary: Report of the Epidemiology Subcommittee

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Dumbleton K, Caffery B, Dogru M, Hickson-Curran S, Kern J, Kojima T, Morgan PB, Purslow C, Robertson DM, Nelson JD. The TFOS International Workshop on Contact Lens Discomfort: Report of the Subcommittee on Epidemiology. Investigative Ophthalmology and Vision Science 2013 54:TFOS20-TFOS36.

Contact lens discomfort: A key factor in contact lens dropout

The reported incidence of drop out due to contact lens discomfort is between 12 and 51%, making it a key factor in permanent contact lens discontinuation for patients. Challenges in assessing the epidemiology of contact lens dryness, however, have made it difficult to get a clear assessment on the prevalence of the condition.

There are estimates of around 140 million contact lens wearers worldwide, however a count on the number of individuals who have worn lenses in the past and ceased lens wear due to CLD is difficult to obtain. In those that continue to wear contact lenses, the prevalence of CLD and dryness symptoms reported in literature has consistently been around 50%.

Limited information

While the contact lens industry has seen significant improvement in contact lens technology, it is difficult to determine whether these enhancements actually demonstrate a significant improvement in contact lens discomfort. Since published data have been limited to using available lenses, clinical research has been constrained by the fact that the properties in those lenses are predetermined by the lens material and cannot be studied in isolation, making it hard to pin point a single parameter contributing to CLD. Additionally controlling for the lens care regimen in studies is often ignored in analyses and presents as another confounding factor.

Furthermore, no prospectively designed epidemiological studies investigating the natural occurrence and evolution of contact lens discomfort are available. Most of our knowledge comes from studies designed for investigating the prevalence of dry eye, and these studies were conducted in infrequent lens wearers. Most studies of contact lens discomfort have been performed in clinical practice or hospital settings in just a few countries, making it impossible to generalize the results.

These constraints in turn limit our understanding of the cause of contact lens discomfort and the relationship between signs and symptoms, making the prevention and management of contact lens discomfort by eye care practitioners a difficult task.

Moving forward

Further epidemiological work that defines the natural occurrence and evolution of contact lens discomfort in additional countries both in rural and urban settings is required. As the exact cause of contact lens discomfort is yet to be established and because it is reported primarily on patient recall, the use of symptomatology as an outcome measure is best. Questionnaires can be used to collect data on the frequency and intensity of contact lens discomfort. Specifically the Contact Lens Dry Eye Questionnaire-8, has shown promising results in diagnosing and measuring changes in CLD.

For further details, please refer to The TFOS International Workshop on Contact Lens Discomfort: Report of the Epidemiology Subcommittee.