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Dry Eye Syndrome: Recent studies estimate that approximately 25% of Indians experience symptoms associated with dry eyes, highlighting the widespread nature of this condition in the country.

Dr Brahmi Pandey

Dry eye syndrome, a globally pervasive ocular condition, is of particular significance in India, where a substantial portion of the population grapples with its impact on ocular health. Recent studies estimate that approximately 25% of Indians experience symptoms associated with dry eyes, highlighting the widespread nature of this condition in the country. As we delve into the complexities of ocular health, it becomes imperative to understand the unique challenges posed by dry eyes in the Indian context, and the pivotal role that advanced cornea services play in addressing this prevalent issue.

India's varied climate, which is marked by fluctuating humidity levels and pollution from the environment, complicates the situation with dry eyes. Dry eye symptoms can be made worse by elements like air pollution, which is common in cities, and high temperatures. For these reasons, it's important to address this public health issue. Moreover, the growing incidence of digital device usage, which is frequently linked to dry eyes, emphasises the necessity of comprehensive ocular care customised for the Indian population.

Here is an effort to demystify dry eyes by exploring the multifaceted factors contributing to its development and delving into the advanced cornea services designed to preserve and enhance optimal ocular surface health.

Understanding Dry Eyes

Dry eye syndrome is characterized by an imbalance in the composition or quantity of tears, resulting in insufficient lubrication for the eyes. The tear film comprises three layers – aqueous, lipid, and mucin – and any disruption in this delicate equilibrium can lead to dry eyes. The cornea, as the eye's transparent outermost layer, is particularly vulnerable to the effects of inadequate lubrication, often manifesting as discomfort, irritation, and potential damage to the corneal surface.

Causes Of Dry Eyes

A myriad of factors contributes to the onset and exacerbation of dry eyes. Environmental influences, such as low humidity or exposure to wind and smoke, can play a role. Aging is another significant factor, as tear production tends to diminish with age. Hormonal changes, prevalent in women during pregnancy or menopause, can also impact tear quality. Additionally, systemic conditions like diabetes, rheumatoid arthritis, and medications such as antihistamines or antidepressants are known culprits in inducing or worsening dry eye symptoms.

Diagnostic Tools

Advanced diagnostic tools, including tear osmolarity measurements, Inflamm Dry tests, and corneal staining with vital dyes like fluorescein and Lissamine green, enable ophthalmologists to pinpoint the root causes of dry eyes with precision.

Customized Treatment Plans

Personalized treatment plans often begin with artificial tears or lubricating eye drops. Lifestyle modifications, including proper hydration, use of humidifiers, and regular breaks during extended screen time, are also integral components of the treatment approach. Prescription medications like cyclosporine and lifitegrast may be prescribed to manage inflammation.

Thermal Pulsation Technology

Thermal pulsation technology is used to address meibomian gland dysfunction, a common contributor to evaporative dry eye. By applying controlled heat and gentle pressure to the eyelids, this technology is used by devices that effectively clear blocked glands, restoring the lipid layer of the tear film.

Amniotic Membrane Transplants

Severe cases of dry eyes, leading to corneal damage, may benefit from amniotic membrane transplants. These grafts, derived from human placental tissue, contain growth factors and anti-inflammatory properties that promote corneal healing.

Corneal Collagen Cross-Linking

Corneal collagen cross-linking, a well-established procedure for treating keratoconus, has shown promise in managing corneal thinning associated with severe dry eyes. This minimally invasive procedure strengthens the cornea by enhancing collagen bonds.

Scleral Lenses

Scleral lenses, characterized by their large diameter that extends beyond the cornea to rest on the sclera, offer relief for dry eyes. These lenses create a fluid reservoir between the lens and cornea, ensuring constant hydration and minimizing discomfort.

Conclusion

The field of managing dry eyes has undergone substantial change, and today's advanced cornea services provide a wide range of diagnostic and treatment options. When exploring the complex world of eye health, it's important to understand that treating dry eyes involves more than just symptom relief. The cornea requires careful attention and care since it is a guardian of the health of the eyes.

It is recommended that people who have symptoms of dry eyes that do not go away consult cornea specialists. Equipped with the most recent developments in ocular care, these experts are prepared to customize interventions to meet the specific needs of each patient.

(The author is a cataract specialist and ophthalmologist, and Medical Director, Balaji ENT and EYE Hospital).