

A Critical review on Dry Eye Syndrome and its Ayurvedic Approach

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Abstract

To help keep your eyes comfortable and your vision optimal, a normal, thin film of tears coats your eyes. Three main layers make up this tear film:

The innermost layer is the thinnest. It is a layer of mucin (or mucus) layer of mucus is produced by the cells in the conjunctiva (The mucus helps the overlying watery layer to spread evenly over the eye. The middle (or aqueous) layer is the largest and the thickest. This layer is essentially a very dilute saltwater solution. The lacrimal glands under the upper lids and the accessory tear glands produce this watery layer. This layer's function is to keep the eye moist and comfortable, as well as to help flush out any dust, debris, or foreign objects that may get into the eye. The most superficial layer is a very thin layer of lipids (fats or oils). These lipids are produced by the Meibomian glands and the glands of Zeis (oil glands in the eyelids). The main function of this lipid layer is to help decrease evaporation of the watery layer beneath it. Dry eye syndrome (DES) is a common disorder of the tear film, affecting a significant percentage of the population, especially those older than 40 years of age. DES can affect any race and is more common in women than in men. Dry Eye Syndrome is more prevalent in Metro-cities. Research shows that cities with high levels of air pollution have an increased risk of dry eye syndrome.

Dry Eye Syndrome is high among computer users. More than 75% of people, who routinely use a computer at work may suffer from dry eye syndrome. The symptoms of dry eye i.e. dryness, irritation, foreign body sensation, redness etc. are similar to that of Shushkakshipak. Thus Shushkakshipak can be correlated with dry eye syndrome

Keywords: Dry Eye Syndrome, Eye Syndrome

Dry Eye Syndrome is widespread disease accompanied by discomfort and potential visual impairments. Basic causes are; tear film inability and hyperosmolarity of the tear film. Dry eyes described as decreased quality or quantity of tears.

Symptoms of Dry Eye:

Persistent dryness, itching, burning sensation, red eyes are common symptoms of dry eyes. But sometimes to diagnose dry eye syndrome a test is required, which is called 'Schirmer's I test'. And it may seem odd, but dry eye syndrome also can cause watery eyes. This is because, the dryness on the eye surface sometimes will over-stimulate production of the watery component of tears as a protective mechanism.

Causes of dry Eye:

1. It occurs as a part of the natural aging process.

2. As a side effect of many medications, such as antihistamines, antidepressants, antihypertensive, birth control pills etc.
3. Living in a dry, dusty or windy climate. If home or office has air conditioning or dry heating system, then they it also can cause dry eyes.
4. Another cause is insufficient blinking, such as staring at a computer screen for a long period of time.
5. Long term contact lens wearer.
6. Incomplete closure of eyelids, eyelid diseases and deficiency of the tears by tear producing glands, are the other causes.etc.

Components and mechanism of tear secretion:

Tear consists of three essential components:

- The Outer – Oily component
- The Middle – Watery or aqueous component
- The Inner – Mucin component

Each component of tear film serves a critical purpose.

For example: Lipid layer prevents evaporation and increases lubrication. Mucin layer allows wetting of the ocular surface as well as stabilizes the tear film. Aqueous layer consists of antibacterial substances like; lysozyme, betalysin and lactoferrin.

Each tear component is produced by different gland. The outer oily layer is produced by Mubomian glands in the eyelids. The middle aqueous layer is produced by Lacrimal glands located above the outer corner of the eyes. The inner mucin layer is produced by Goblet cells in conjunctiva.

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Treatment of Dry Eyes Syndrome:

Dry Eye Syndrome is chronic and typically progressive condition that may not be completely curable (depending on the cause). But some symptoms like dryness, itching or burning can be manageable. Because dry eye can be caused by many different things, a variety of treatments are used.

Lubricating Eye drops:

Artificial tears which are lubricating eye drops, which may help to decrease the symptoms of dryness.

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Causes of Dry Eye Syndrome, in Ayurved point of view, are Heena, Ati and Mithya yog; e.g. Excess use of computer, polluted air, viewing of TV, excessive outdoor work etc.

Symptoms of Shushkakshipak are Gharshan (gritting sensation), Toda (pricking pain), Krichomeelan (difficulty in opening and closing of eyelid), Vishushkates (dryness). These symptoms can be correlated with Dry eye.

In Ayurved samhitas different types of treatments and procedures like; kriyakalpus, eye exercises and medicines are suggested to cure the Dry Eye Syndrome. As per acharya Vagbhat Sheeta, Snigdha and the drug with Vatta pittaghna property are very useful in treatment of Dry Eye Syndrome.

Conclusion:

Dry Eye Syndrome is widespread disease. This disease is not frequent cause of blindness, but still it is important because its symptoms are very bothersome and lead to decrease in quality of life and reduce work capacity. Dry Eye Syndrome is associated with decrease in ability to perform activities that require visual attention, such as reading and driving.

Lubricating drops can reduce the symptoms of Dry Eye Syndrome, but long term use is not possible, because effects of these drops are temporary.

It can be correlated to symptoms of Shushkakshipak of Sarvagat netravayadhi. On critical analysis of symptoms of Dry Eye Syndrome on Tridoshik theory of Ayurved, it seems to be Vata-pittajanya Vyadhi.

In the treatment of Dry Eye Syndrome, Ayurved has much to offer through Kriyakalpas, eye exercises and medications.

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