

AN AYURVEDIC INSIGHT TOWARDS DRY EYE DISEASE

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Abstract

Dry eye disease is not a diseases entity but a symptom complex occurring as a sequel to deficiency or abnormalities of the tear film. The conventional and main approach in the treatment of dry eye disease is lubricating eye drops and tear substitutes. In spite of various advances in the management of dry eye the effective control is a challenge. There is a great need of find out drugs or therapy which can be beneficial for the management of dry eye without any side effects. This review article focuses on understanding dry eye in Ayurvedic classics and available drug or procedures which can be beneficial for the management of the disease.

Keywords: Dry eye disease; Tear; Shushkaksipaka; Tarpana.

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INTRODUCTION

Dry eye disease (DED), also known as keratoconjunctivitis sicca is the most frequent disorder in Ophthalmology.^[1] It is a multifactorial disorder of the tears and ocular surface.^[2] DED is characterized by chronic dryness of the cornea and conjunctiva which is caused by unstable tear film.^[3] There is an increase in prevalence of DED in recent years due to the general aging of the population and increased use of some drugs.^{[4][5]} A number of contributory factors affect the severity of dry eye syndrome, including autoimmune disease, anatomical features, environmental surroundings, contact lens use, hormonal changes, chronic inflammation, infections, and iatrogenic factors, such as medications or surgery.^[6] Dry eye disease can hinder the performance of activities of daily living and is associated with an overall decrease in quality of life.^[7] The symptoms of DED are feeling of dryness, foreign body sensation, pain, redness, burning or stinging, light sensitivity, grittiness and itchiness which have negatively impact on the quality of life, with a greater risk of depression and anxiety.^{[8][9]} Preservative-free tear substitutes are the first step in medical management of DED^[10] which increases humidity and improves lubrication at the ocular surface.^[11] The preservative present in these formulations also causes dry eye. Temporary symptomatic relief can be obtained by these modalities of modern treatment, but there is no satisfactory treatment of Dry Eye at present. In these situation researchers always tries to find out drug or procedure to get relief having no or least adverse effect.

Ayurvedic perspective

The concept of dry eye does not found in Ayurveda as such. But different eye diseases in classic on the basis of their signs and symptoms closely related with dry eye are included in this group. Clinical feature of dry eye described in modern ophthalmology may

resemble with the various ocular disorder described in Ayurveda especially in shalakya tantra. There are so many diseases in Ayurvedic classic which may be closely resemble with dry eye and may be treated on the basis of clinical signs and Symptoms. Some of them are- Suskakshipaka,^[12] Suktika,^[13] Avransukra^[14] having maximum similarity to Dry eye described in modern Ophthalmology.

Clinical presentation of Suskakashipaka

In this condition eyes were affected mainly by deranged vata dosha. Characteristics of the diseases are dryness, unwettability loss of transparency thickening and wrinkling of the vartmakala or whole eye, blurred vision, inability of closing and opening eye due to thickening of the eyelids (Blepharospasm),^[15] pain, burning sensation and pthisis of the eye ball.^[16]

Clinical presentation of Suktika

Dirty white, brownish colour as well as flesh coloured raised spots are situated on the white part of the eye. These sports having luster of an oyster shell or pearl shell alongwith dirty glass like appearance of the conjunctiva,^[17] associated with diarrhea polydipsia and Pyrexia including Pain and burning sensation in the eye respectively.^[18]

Clinical presentation of Avranasukra

The signs and symptoms of Avrana-Sukra more closely similarly with corneal xerosis which is described in modern ophthalmology. Avrana Sukra is characterized by the appearance of Haziness of cornea, followed by inhibition of lacrimation. Thus this condition seem to be the nearest to the clinical picture of Corneal xerosis.^[19] As per etymological derivation^[20] and clinical symptoms Suskaksipaka is more commonly compared with Dry eye disease.

Table 1: Showing Classification of Kriyakalpa

Kriyakalpa	Susruta	Vagbhata	Sharangdhar	Bhav Mishra
Tarpan	+	+	+	+
Putapaka	+	+	+	+
Seka	+	+	+	+
Ashyotan	+	+	+	+
Anjan	+	+	+	+
Pindi	-	-	+	+
Vidalaka	-	+	+	+

Table 2: Showing Kriya Kalpa in Ayurveda

Kriya Kalpa	Formulations used
Tarpana	Ghee or oil preparation
Putapaka	Plant extract after closed chamber combustion
Seka	Decoction of raw drug
Aschyotan	Decoction /juice of raw drug
Anjan	Linctus of drugs of different origin
Pindi	Poultice of different parts of a plant
Vidalak	Paste of herbs applied over the lids

As per Ayurveda, Sushkaksipaka is described under sarvagata roga (diseases affecting all parts of eye).^[21] Dhiman studied systemic holistic approach of Ayurveda on a patient of dry eye disease as a case study.^[22] The removal of etiological factors^[23] is the main principal of treatment of eye diseases that is “prevention is better than cure”. Treatment used for Sushkaksipaka is Ghrutapana, Jivantiyadi Ghruta Tarpana, Anutaila Nasya and Anjana.^[24]

Kriyakalpa

Kriyakalpa - the local ocular therapeutic procedures are a group of special methods of drug administration, locally into the eye, for the treatment of eye diseases, which provides nourishing effect to the eyes and improves visual acuity. The word Kriyakalpa literally means to perform proper treatment.^[25]

Classification of Kriyakalpa were mentioned in Table 1.^{[26][27]}

Indication for Tarpana Karma

The indication of Tarpana karma is, when a patient sees darkness in front of eyes, in severe dryness of the eyes, much roughness of the eyes, stiffness of the eyelids, falling of eye lashes / Madarosis, dirtiness of the eyes / altered or lost lustre of ocular surface, deviated eye ball / Squint and in extreme aggravation of the diseases of the eye.^[28]

The drug contact time has an effect upon the absorption and penetration of drugs. Specific duration of contact time has been mentioned in our ancient classics for specific disorders.^[29] Tarpan in vataja diseases is done for longer duration of time as compared to pittaja and kaphaja diseases.^[30] In tarpan the medicated ghee is used on ocular surface for longer duration of time, which increases tissue contact time providing more absorption of drugs with lubrication of ocular surface and more therapeutic effect. A drug with both hydrophilic and lipophilic properties is most appropriate for transcorneal absorption.^[31] This information is useful for tarpana assessment.

CONCLUSION

Dry eye syndrome is a very common condition that is characterized by a disturbance of the tear film and associated with an overall decrease in quality of life. The main object of dry eye therapy is to preservative of already existing tears or reduction of normal tear drainage or both. Temporary symptomatic relief can be obtained by available modern modalities of modern treatment. Ayurvedic procedures like tarpana therapy can be beneficial for the management of dry eye without any side effects.

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