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A CLINICAL STUDY ON THE EFFICACY OF PAYA-SAINDHAVA PARISHEKA IN THE MANAGEMENT OF SHUSHKAKSHIPAKA W.S.R. TO DRY EYE SYNDROME

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Abstract:

Sushkakshipaka, compared as dry eye syndrome (DES) or dysfunctional tear syndrome (DTS) as per latest DEWS definition is considered as a sarvakshigatharoga. The climate of tropical India and globalization along with the sprout of millions of IT professionals are making DES, a fast growing disease. All these factors along with improper diet and living habits, abuse of hormones and other medicines, ageing etc. are making the scene very worse. Its increased prevalence (one among five persons) as well as complications, along with the limitations of the present modern treatment, suggests that it is necessary to look at an alternative therapy which is safe, cheap, simple, easily available and more effective for DES.

Parisheka with paya (milk) and saindhava (rock salt) is mentioned in its treatment with great importance by different Acharyas. Ocular pharmacology of parisheka and clinical trial very well matches with the opinion of Acharyas

Keywords: *Sushkakshipaka, dry eye syndrome, paya-saindhava parisheka, pathya*

INTRODUCTION:

Dry eye occurs when there is inadequate tear volume or function resulting in an unstable tear film and ocular surface disease. It is not a disease entity but a symptom complex occurring as a sequelae due to deficiency or abnormalities of the tear film.

Dry eye was given so many dimensions like symptoms (in systemic diseases like, RA, SLE, Rosacea, S. Sy etc), syndrome, dry eye disease and latest Dysfunctional Tear Syndrome (DTS). Climate of tropical India and globalization along with the sprout of millions of IT professionals are making dry eye syndrome a fast growing disease. All these factors along with aging and abuse of hormones and other medicines, imbalanced diet and regime, etc. leads to increased tear evaporation (due to dry wind, air conditioning, decreased blink reflex)⁶, aqueous tear deficiency, mucin deficiency, lipid deficiency, impaired lid function, irregular corneal surface etc. Dry eye if not treated will lead to complication like superficial punctate keratitis, corneal mucous plaques, marginal

corneal thinning, band shaped keratopathy, corneal ulcers, etc⁷. Hence newer and newer definitions are coming for dry eye ranging from dry eye disease to DTS. Other names synonymous to dry eye includes DES, KCS, DTS, Lacrimal Keratoconjunctivitis, Evaporative tear deficiency,

Aqueous tear deficiency and LASIK-induced neurotrophic epitheliopathy (LNE) as per The ocular surface/April 2007 Vol 5 No:2

“Dry eye is a disease of ocular surface attributable to different disturbances of the natural function and protective mechanism of the external eye, leading to an unstable tear film during the open eye state (Surv Ophthalmol, 2001, 45(2) S 199- 202).

Newer DEWS definition is that “Dry eye (DTS) is a multi-factorial disease of the tears and ocular surface that results in symptoms of discomfort, visual disturbance and tear film instability with potential damage to the ocular surface. It is accompanied by increased osmolarity of tear film and inflammation of ocular surface” (Delphi-DEWS Model- 2006-2007) which very well matches to the Ayurvedic definition of Sushkakshipaka.

In modern pharmacotherapy, the available treatments for dry eye includes tear conservation, tear substitution, mucolytics, reducing tear drainage (by permanent or temporary punctual occlusion), systematic therapy (steroids, Bromohexidine), Immunomodulators, treatment of associated disease, hydrophilic contact lens, Trans- retinoic acid ointment (reverses Squamous metaplasia of ocular surface), etc. But as the above treatment modalities have draw backs like requirement of frequent instillation, toxicity due to preservatives, costly regimen, surgical complication and sequele, inflammations, metaplasia, etc. it is very important to look at an alternative therapy which is safe, cheap, easily available and more effective to dry eye. Here comes the importance of Ayurveda. According to Ayurvedic scholars so many treatment modalities are applicable in Sushkakshipaka including snehapana, tarpana, putapaka, nasya, aschodana, parisheka, vasthi, anjana, etc. Out of which parisheka with paya and saindhava is told with great importance by sarangadhara, vagbhata, susruta, yogaratnakara, etc.

Here an attempt is made to study the efficacy of paya-saindhava parisheka in the management of sushkakshipaka as it will be affordable to all categories of patients and easy to administrate even at OPD levels and at home.

Aims & Objects:

1. To study the concepts of sushkakshipaka and dry eye syndrome in detail.
2. To study the efficacy of paya-saindhava parisheka in the management of sushkakshipaka.
3. To popularize a simple, affordable, OPD level treatment modality in the management of sushkakshipaka.

MATERIALS AND METHODS:

Method of Collection:

30 patients of Sushkakshipaka fulfilling the inclusion criteria will be selected. The clinical feature could be recorded in the proforma designed for the study.

Inclusion Criteria:

1. Age group between 20 and 70
2. Patients with clinical features as per classic will be taken after proper screening. Patients of either sex will be taken.

Exclusion criteria:

1. Age group less than 20 years and more than 70 years.
2. Known cases of infective conditions of eye
3. Patients in the complicated stage with corneal ulcer.

Assessment criteria: Assessment is done on the basis of improvement in signs and symptoms. Patients were assessed with subjective and objective parameters before and after the treatment.

Study Design:

An open clinical trial was adopted. 30 patients fulfilling the criteria for inclusion were assessed by before and after trial method. Seka (parisheka) was done as Sookshma dhara with Koshna paya mixed with saindhava for a duration of 600 matrakala from a height of 4 angulas, over the closed eyes for a period of 7 days in the evening.

Materials required for Parisheka:

- 1) Cowsmilk and Saindhava
- 2) Dry cotton
- 3) Hot water
- 4) Varthi
- 5) Dhara can
- 6) Kidney tray.

Discussion:

Effect of therapy was assessed in 30 patients (60eyes) on the basis of changes observed in cardinal signs, symptoms and diagnostic tests. Statistical analysis was conducted to know their significance.

The response to treatment was assessed just after treatment (AT₀) and during follow ups (AT₁ and AT₂).

In the all the cases of the mean score showed an increase from Before Treatment to AT₀, AT₁ and AT₂ which showed highly significant statistical analysis (P <0.0001). but the percentage of increase in the mean scores varied as per signs, symptoms and diagnostic tests. The percentage of improvement of each parameters ranged from 10.71 % to 50.62 %. The patients who followed pathya were able to maintain the improvement even during the following up periods.

In the case of dryness maximum improvement was seen during first follow up. In Foreign Body sensation, maximum improvement was seen just after treatment and the same happened in heaviness of lids and difficulty in lid movement also. In burning sensation maximum improvement was seen in the first follow up. In the case of transient blurring maximum improvement was seen just after treatment. But in stringy discharge maximum improvement was seen in 2nd follow up. In shirmers test and RB staining maximum result was seen just after the treatment. Conjunctival congestion and redness improved more in first follow up. While tarsal follicle improved to maximum just after treatment. In the case of discharge the best result was obtained during second follow-up.

Probable Mode of Action of Drug

Vatha and pitha along with raktha are the factors which gets vitiated in sushkakshipaka. The vatha, pitha, vridhis indirectly leads to kapha kshaya. Decrease of snigda guna and increase of ruksha guna initiates the pathology. Ruksha, laghu, khara, sukshma gunas of vata and ushna, laghu, tikshna gunas of pitha increases and kapha kshaya sets in which leads to decreased netraposhana. Due to this sushkakshipaka occurs and vyadhikshamatwa of netra decreases. As a result, paka sets in along with different types of pains. So the principle of treatment should be vatha pitha samana, chakshushya and brimhana.

Acharyas have explained paya saindhava parisheka in the management of sushkakshipaka. The parisheka drug contain paya and saindhava. Both of which have vata- pitha hara property and chakshushya property.

Paya (cow's milk) have properties like madhura rasa, and vipaka, guru and snigdha guna and seetaveerya. By these properties it is able to cure vatha and pitha.

Moreover the santhanika produced after boiling the milk have vatha, pitha raktha hara property which is really opposite to the dosha of disease. The snigda guna and brimhana property is very much helpful in the movement of eye lids. As paya settles as three layers, it can also mimic the 3 layers of tear to some extent. The lipophilic cornea can very well allow the milk fat to adhere and to enter through corneal route. The saindhava may be increasing the penetrating capacity by both transcellular and paracellular routes. Hence the overall effect of paya results in vathapitha haratwa and kapha vardhakatwa along with rasayana, jeevaneeya, dhathu vardhaka and raktha alleviation property. All these are included in the principle of treatment of sushkakshipaka. Hence ocular tissue is nourished and degeneration is prevented.

In general lavana has properties like Ushna Thikshna guna, Vishyandi, Paki, Vata samana and Kapha Pitta vardhaka. It is considered as achakshushya. Among all lavanas Saindhava lavana is considered as lavanottama because of its properties like Madhura rasa, Seeta virya (anushna), Laghu, Snigdha, Sukshma gunas, Tridosha samana and Chakshushya. In Kharanada samhita it is mentioned that chakshushya action of Saindhava lavana is due to its ability to mitigate Pitta. In this study

minute quantity of Saindhava lavana which is added to the preparation might have worked by its chakshushya and tridosaharatwa properties. Apart from this saindhava lavanahas sukshma guna. By virtue of this sukshma guna it can penetrate sukshma srothases of the eye. Hence with the help of saindhava lavana paya reaches the ocular tissues quickly and its action is accelerated. In modern ocular pharmacology it is told that ocular penetration enhancers and enhancing corneal permeability can improve the drug absorption via corneal and non corneal routes from the ocular surface.

It is also studied that sodium bicarbonate in tear heals the defect in corneal epithelium faster. Saindhava also contain sodium bicarbonate which also may help in healing process. The following gunas will be very beneficial in the paka state of dry eye. Due to similarity of elements in saindhava in tear fluids, before the advent of tear supplements 6 percentage aqueous NaCl (Hyper tonic saline) was used for irrigation in dry eye.

While considering the 3 layers of tear film. Outer layer is rich in lipids, the middle layer is aqueous and inner most layer is of mucin from goblet cells. Likewise milk also settles in 3 layers. The whole milk is rich in vitamin A and goblet cells density reflects vitamin A level is absence of other disease. Like middleaqueous layer of tear film, milk contain milk plasma as middle layer. Also the saindhava lavana solution has elements similar to tear fluid. Like the upper lipid layer of tear film which is composed of cholesterol, fatty acids, fat and polar lipids, milk also has an upper layer composed of fat or cream. Hence when this top most milk layer forms a uniform layer over ocular surface; it reduces excessive evaporation of tear and prevents dry eye. It also prevents the outflow of tear and allows additional ocular lubrication. It lowers the surface tension of the tear film. This in turn draws water into the tear film and thickens the aqueous layer.

Hence paya and saindhava together relieves sushka and paka stage of disease. Especially saindhava acts as an enhancer and stimulate their action. Also the procedure itself, with kosha paya-saindhava mixture, may be acting as a vaso dilator and thus increasing the blood supply and can open sookshma srothases and can wash out the debris from srothases and can give nourishment, so that to correct Khavaigunya. Hence it may result in the normal functioning of asruvaha srothas.

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