

APPLICATION OF HERBAL EYE DROPS IN CONJUNCTIVITIS – A CASE STUDY

¹G. Sritharan, ²S. Ganesan, ³S. Anpuchelvy

¹*Herbal Health Care Centre, ²Siddha Dispensary, Municipal Council Jaffna,*

³*University of Jaffna, Sri Lanka*

ABSTRACT

Conjunctivitis is a common clinical condition faced by medical practitioners. Allergic conjunctivitis could be the most common clinical condition in the group of allergic ocular disease. A 50 years old male patient presented with complaints of swelling, redness, itching, discharge and moderate pain in the left eye on 1 April 2022. He consulted an ophthalmologist and prescribed eye drops doesn't provide any significant relief. However, the patient got mild symptomatic relief but it relapses in few days. Therefore, the patient seeks native Siddha Ayurveda treatment. Conjunctivitis is common disease in a day to day practice. Moreover, contemporary medicine has lot of side effects associated with it. Hence there is urgency to find an actual and fruitful treatment in indigenous sector. Herbal eye drops called as Elaneerkulambu has herbal properties of anti-inflammatory, antimicrobial, bactericidal, & bacteriostatic and the mineral (rock salts) has properties of stimulating blood circulation, maintain pH balance, anti-microbial, maintaining normal hydration of corneal surface for a longer duration. Action of Elaneerkulambu is found quick & efficient. The liquid foam of drug enhances increased absorption through thin layer of eye lid. After 4 days treatment of conjunctivitis, complete relief from symptoms of redness, burning sensation and watering of the eye was observed. This case study would be a good initiative of controlling simple conjunctivitis and

become very useful to indigenous practitioners to overcome this clinical condition in daily practices.

Key words: Elaneerkulambu, Anti-microbial, Siddha Medicine

INTRODUCTION

Allergic conjunctivitis is a non-infectious clinical condition. About 15-20% of world population suffer from some sort of allergic ocular disease (Bielary,2008). Allergic conjunctivitis may be the most common clinical condition in the group of allergic ocular disease (Dutta.et.al 2009). There are several forms of allergic conjunctivitis. One of them is vernal conjunctivitis. "vernal" comes from the Greek word meaning "occurring in spring" (Berti,2005). It is a common disease worldwide and affects all races. All allergic conjunctivitis is typical mast cell mediated hypersensitivity reaction (Khurana,2006). Correct involvement occurs in about 50% of patients with vernal conjunctivitis. Its main symptoms include intense itching of the eyes, watering, photophobia, foreign body sensation, thickening, tenacious, yellowish ropy discharge consisting of mucus, epithelial cells, eosinophils, neutrophils etc. (Narayan Vidwans). The main complication of vernal keratoconjunctivitis are very much disturbing that it could affect the daily activities of the subject. The possible

complications also, cannot be ignored (Liu,199). So complete cure to all the disturbing symptoms of allergic conjunctivitis as well as the prevention of complications like keratitis, keratoconus etc. Is a challenge to the dealing ophthalmologist (Ono,2005). The allopathic approach includes elimination of allergen, which is logically not possible, desensitization (may be attempted by long course of injections) decongestant eyedrops, mast cell stabilizers, steroids (on long term use may cause other complications like early cataract, raised intra ocular pressure etc.) So, Siddha Ayurvedic treatment could do the complete cure of the disease as well as the prevention of all possible complications (Pandit Parasuram Sashtry,2012)

Methods

Objectives: To Manage allergic conjunctivitis with Siddha Ayurvedic ocular therapeutics

Case history

A 50 years old male patient presented with complaints of swelling, redness, itching, discharge and moderate pain in the left eye on 1 April 2022. He consulted an ophthalmologist and prescribed eye drops doesn't provide any significant relief. However, the patient got mild symptomatic relief but it relapses in few days. Therefore, the patient seeks native Siddha Ayurveda treatment.

General Examination

Pallor – Absent

Icterus - Absent

Cyanosis - Absent

Clubbing - Absent

Lymphadenopathy – Non-palpable

Oedema -- Absent

BP - 125/ 80 mmHg

Pulse – 74 / bpm

Systemic Examination – CVS, CNS, RS, GIT - No abnormality.

Local Examination –

Head posture – Head is kept in straight and erect posture without any tilt of head

Facial Symmetry – Both eyebrows and eyelids are at the same level

Ocular posture – visual axes of two eyes are parallel to each other in primary position and is maintained in all position of gaze.

Table: 1- Visual acuity

	Right Eye	Left Eye	Both Eye
Before Treatment	6/6 (p)	6/6 (p)	6/6 (p)
After Treatment	6/6	6/6	6/6

Eyebrows - symmetrically placed on each side of face above eyelids

Eyelids – Upper eyelid covers 1/6 th of cornea Lower eyelid touches the limbus

Eye lashes- Upper eye lid – directed forwards. Upwards and backwards.

Lower eye lids directed forwards downwards and backwards No trichiasis, poliosis

Lacrimal apparatus – skin over lacrimal sac – redness, swelling absent

Eyeball – proptosis, enophthalmos-absent Movements unocular and binocular movements possible

Conjunctiva – congestion, resented in lower palpebral conjunctiva

Chemosis: absent

Discoloration – reddish

Papillae – present

Pterygium and pinguecula – absent

Sclera – engorged episcleral vessels

Microcornea – absent

Shape – concavo – convex shaped

Keratoconus, keratoglobus – absent

Surface – smooth

Transparency – no opacities found

Anterior chamber – shallow torch light method

Iris pattern – presence of crypts, ridges and collarets

Pupil - one in number

Site – centrally placed

Shape – round

Colour – black

Reflexes – good mydriasis, miosis-
assent



Fig – I-Clinical Images Before treatment

Therapeutic of Siddha Ayurveda

Herbal formulation is one of the ocular therapeutic of Siddha Ayurveda in which drugs are made into oil base form and applied to the outer surface of the eyelids leaving the eye lashes. The oil is left on site until it starts drying (for 20-25 minutes). Medicine applied on the outer surface of lids is absorbed by the skin to a greater extent reaching to subcutaneous and local temperature there by relives inflammation, impairing soothing effect and reduce and relieving pain. Since tissue contact time is more and herbal formulation helps in large absorption of drugs and bioavailability will be enhanced. Since the drugs have anti-infective, analgesic & anti-inflammatory properties. Patient could get quick relief from the symptoms.

The Ayurvedic scientists Acharya Charaka , Acharya Vagabhata and Agasthiyar have mentioned about this therapy. They were aware of drug delivery through skin of eyelids. The skin of eye lids is extremely thin, subcutaneous fat is very sparse and stratum corneum layer of

skin which acts as barrier is a single layer in eye lids, so absorption of drugs through skin of eye lids will be very fast. Herbal formulation the oil drugs is left for 20 minutes which provides more tissue contact time that accelerates the absorption.



Fig-II -Clinical Images During the treatment



Fig – III-Clinical Images After treatment

Treatment procedure

1. Oral medications.

Tripala Goggulu 2 BD A/ C - 4. Days.

Preparation of Elanneerkuzhambu
(Herbal Eye Drops)

2. Application of eye drops.

Elaneer Kuzhambu (Herbal
formulation) – 2 to 3 drops BD – 4 Days

*Table:2- Contents of Elaneerkuzhambu
(Agathiyar nayana vithi” 1976)*

No	Ingredients	Measurements
1	<i>Berberis aristate</i>	96g
2	<i>Terminalia chebula</i>	96g
3	<i>Terminalia bellirica</i>	96g
4	<i>Embllica officinalis</i>	96g
5	<i>Glycyrrhiza glbra</i>	144g
6	<i>Coconut water</i>	8.172 l
7	<i>Cinnamomum camphor</i> \ (camphor)	12g
8	<i>Rock salt</i>	6g
9.	Honey	170g

The above (1-5) contents were powdered and boiled in coconut water till its volume is reduced to 1/8 portion and filtered. The filtered 1.022 liters decoction was further heated and fine powdered camphor, rock salt was added and left to become cool. Finally, bee honey was added and mixed well.

Prognosis Assessment

Improvements in signs and symptoms were monitored & recorded.

On the first day, He was complaining of photophobia and severe burning sensation of the eye.

Second day of treatment, he felt 50% relief of those complaints.

Redness of eye was reduced after 4 days treatment.

Compare to first day and fourth day of treatment he had complete relief from the symptoms of redness, burning sensation and watering of the eye.

RESULT & DISCUSSION

After completion of treatment for 4 days, complete relief from all symptoms like, eyelid swellings, redness of eye were reduced. Prognosis of treatment of Conjunctivitis is shown in the following manner. Images- 1 shows before treatment, and 2 shows during the treatment, 3 shows after treatment. Conjunctivitis is an inflammation of

conjunctiva due to allergy. As per modern science, treatment consist of anti- histamine, mast cell stabilizers, dual mechanism anti allergens agents or topical anti histamines. Whereas, in siddha Ayurveda Herbal eye drops is the line of treatment for Allergic conjunctivitis. Elaneerkulambu is an eye care formula, specified in Agathiyar Nayana Vidhi. It is used in treatment of corneal ulcer, pterygium, early stage of cataract, presbyopia and other eye related diseases. It is applied as a paste or eyedrops to the inner side of eye lids. It is sometimes used as a collyrium. It balances Trithodam (Vadham - Pitham -Kabham) in eyes. So, patient was advised to undergo treatment for 4 days. In this case anti-infective, anti-inflammatory properties of Herbal eye formulation provide quick absorption of the drugs along with soothing effects.

Conjunctivitis is common disease in a day to day practice. Moreover, contemporary medicine has lot of side effects associated with it. Hence there is urgency to find an actual and fruitful treatment in indigenous sector. In Elaneerkulambu has property of anti-inflammatory activities, antimicrobial property bactericidal and bacteriostatic action and Rock salts has property of stimulating blood circulation, maintain pH balance, Anti-microbial, maintaining normal hydration of corneal Surface for a longer duration .Action of Elaneerkulambu is quick and efficient as the absorption of liquid drug through thin layer of eye lid is increased due to heat and continuous exposure of liquid foam of drug on eye lid for a short period of time For this reason, this case study would be a good initiative of controlling simple conjunctivitis and become very useful to indigenous practitioners to overcome this clinical condition in daily practice.

Due to anti-infective, anti-inflammatory properties, patient could get quick relief from the symptoms. Elaneerkuzhambu Anjana against the formation of Advanced Glycation End Products. Many components of the test drugs have been evaluated as inhibitors against the formation of Advanced Glycation End Products. Triphala (combination of Terminalia chebula, Emblica officinalis and Terminalia bellerica) extract effectively inhibits protein glycation which is contributed due to presence of tannins (Ganeshpurkar, 2015).

CONCLUSION

The case study showed complete relief from symptoms of allergic conjunctivitis. Therefore, Herbal eye drops can be used in the condition of allergic conjunctivitis, one among the other eye treatment for as per Siddha Ayurveda science. Further its preparation procedure is simple and can be done easily and is cost effectively.

REFERENCES

- Ambikadatta Shastri, Sushrutsamhita, 12th ed. Uttartantra: Chapter 6, Verse 5. New Delhi: Chaukhamba publication, 2001; p. 26.
- “Agathiyar nayana vithi”, palani thandayuthapani publications, TamilnaduV. Viswanathan. L.I.M. (1976),
- Bielary L, Fried, Lanender MH. (February 2008). “Allergic Conjunctivitis” Immunol Allergy ClinMorthAm. 28(1): 43-58.
- Berti JJ, Lipsky JJ, Transcutaneous drug delivery: a practical review. (2005) <https://www.ncbi.nlm.nih.gov/pubmed/7776720>
- Ganeshpurkar, A. Jain, S., & Agarwal, S. (2015). *Experimental studies on glycolytic enzyme inhibitory and antiglycation potential of Triphala*. Ayu, 36(1): 96.
- Khurana, A. K. Comprehensive Ophthalmology. 5th ed. New Delhi: New age International Publishers, (2006) p. 54-55.
- Khurana, A. K. Comprehensive Ophthalmology. 5th ed. New Delhi: New age International Publishers, (2006) p. 56-57.
- Liu G, Keane Myers A, Miyazaki D, Tai A, Ono SJ (1999). “Molecular & Cellular aspects of Allergic Conjunctivitis” Chemimmunol & Allergy, 73.
- Narayan Vidwans. NetrarogVidnyan. 5th ed. Nagapur: Ramadas peth publication. (2003) p. 766.
- Narayan Vidwans. NetrarogVidnyan. 5th ed. Nagapur: Ramadas peth publication. p. 184.
- Ono SJ, Abelson MB (Jan 2005) “Allergic Conjunctivitis: Update on pathophysiology & prospects for future treatment” J. Allergy Clin. Immunol. 115(1): 118-22.
- Pandit Parasuram Sashty Editor, Reprint ed. Sarangdhar Samhita of Sarangdhar Acharya, Uttarkhanda: Chapter 13, Verse 30. Varanasi: Choukambha Orientalia, 2012; p. 398.
- Prof. KS Dhiman. Shalakyatantra – Kriyakalpa Vigyan. 2013 ed. Varanasi: Choukambha Visvabharti, 2013; p. 135-43, 264