

Efficacy of *Netraseka* in Blepharospasm w.s.r to *Kruchronmeelana*

Case Report

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Abstract

Blepharospasm is an act of involuntary blinking. In most of the cases, symptoms last for few days then disappear without any intervention. However in few cases, disease becomes chronic with symptoms of persistent blinking and the person will be able to open his eyes only with a great effort which could eventually lead to a functional blindness. Most of the times it is associated with ALO (Apraxia of lid opening). ALO is an inability to initiate voluntary eyelid opening following a period of eyelid closure. Manual lifting of the eyelid often resolves the problem and lid is able to stay open for a while thereafter. Botulinum toxin injections are the treatment of choice for both Blepharospasm and ALO, which is too expensive and at the same time have only a temporary improvement. In Ayurveda such condition is comparable with *Kruchronmeelana* which is postulated to be resultant of *vata* vitiation. *Netrakalpna* is the therapy of choice to treat above conditions. A single case study done at our department has shown significant improvement both in pain, blinking after the patient was subjected to *Netraseka*. Before *Netraseka* the same patient was treated with *Aksitarpana* which was done with *triphal ghrta* for seven days, but which hasn't produced much difference neither in pain nor in blinking. *Netraseka* was given with a specific *kashaya* for a period of 14 days following *Tarpana* therapy.

Key Words: *Blepharospasm, Apraxia of lid opening, Kruchronmeelana, Aksitarpana, Netraseka.*

Introduction

Blepharospasm is an involuntary recurrent spasm of both eyelids that occurs in elderly persons as an isolated phenomenon or with varying degrees of spasm of other facial muscles (1). It is a relatively common condition which, in its severe form, can be very disabling both in terms of vision and social functions. It is more common in Female with ratio of Female to Male 2:1 and it increases with age. It is a type of focal dystonia in which there is tonic spasm of the orbicularis oculi (2). It may be of 2 types. 1. Essential Blepharospasm, which occurs spontaneously and 2. Reflex Blepharospasm, which may be precipitated by sensory stimuli (3).

Essential blepharospasm is an uncommon but distressing idiopathic disorder which presents in the sixth decade and affects women more commonly than men by a 3:1 ratio. It is characterized by progressive involuntary spasm of the orbicularis oculi and upper facial muscles. In severe cases blepharospasm is disabling because it may temporarily render the patient functionally blind. Spasms may be precipitated by

reading, driving, stress or bright light, and alleviated by talking, walking and relaxation.

Treatment

Prior to commencing treatment it is important to exclude reflex blepharospasm, most commonly due to ocular surface disease such as filamentary keratitis.

- Medical treatment with a great variety of drugs has been reported to ameliorate specific types of blepharospasm, but their efficacy is disappointing.
- Botulinum toxin injected along the upper and lower eyelid and eyebrow which gives temporary relief in most patients. By interference with acetyl choline release from nerve terminals it results in temporary paralysis of the injected muscles. Most patients require repeat injections every 3-4 months. By this treatment Side effects include lagophthalmos and ectropion or entropion, depending on the tone of the eyelids before the injection. Accidental migration of the toxin into the orbit may result in ptosis and diplopia due to paralysis of the levator or extraocular muscles.
- Surgical treatment involves removal of the entire orbicularis, corrugator and procerus muscles. Such radical surgery is reserved for patients who cannot tolerate or are unresponsive to botulinum toxin (4).

Reflex Blepharospasm or Sensory Blepharospasm is commonly caused by bright light, corneal or eyelid irritation. Patients may complain of photophobia, a vague discomfort and a foreign body sensation. Treatment constitutes removal of the sensory stimulus (5).

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Blepharospasm has no direct difference in *Ayurvedic* classics. However, similar clinical manifestation can be observed in a disease called as *Kruchronmeelana*. It is mentioned by Vagbhata as one of the *Vartma gataroga*. In this *Chalavata* spreading through the *siras* (veins) of the eyelids, produce rigidity of the eyelid (inability to open) accompanied by pain after awakening from sleep. Associated symptoms are person feels as though the eye is filled with sand, difficulty to open the lid up, watering of eyes, feels happy by rubbing the eyes (6).

Vagbhata mentioned it as *Aushadha sadyavyadhi* (7). *Snigdha nasya*, *Snigdhadhooma*, *snigdha Anjana* with medicated Ghee which is prepared with *Drakshakalka*, *Purana ghrita* and Sugar (8).

Aims and Objectives

To check the efficacy of simplest and cost effective procedure *Netraseka* in Blepharospasm.

Materials and Methods

Patient was administered with *Netraseka* for a period of 14 days.

Case History

A female patient, aged 55 years, came to OPD of Panchakarma, Dr.B.R.K.R. Govt. Ayurvedic Hospital, Erragadda, Hyderabad on 26-06-2018 with chief complaints of Difficulty in opening of eyelids, Involuntary closing of eyelids and pain in facial muscles while opening of eyes associated with Heaviness of eyelids while opening and Headache occasionally for 2 years. She was diagnosed as a case of Blepharospasm. For 2 years she is taking Botax injections to eyelids. Patient was asymptomatic 3 yrs back she developed frequent blinking of eyelids for 6 months then gradually developed difficulty in opening of eyelids.

On Examination

Opening of eyes with fingers, Slight shaking of Head while speaking.

Clinical findings

She was afebrile. The pulse rate was 74/minute. Respiratory Rate was 16/minute and Blood Pressure was 110/70mmHg. Systemic examination was within normal limits.

Ocular examination

On torch light examination, cornea was clear in both eyes, anterior chamber was normal in both eyes; pupils were of normal size and normal in reaction. On slit lamp examination, both eyes show mild nasal interpalpebral conjunctival staining with fluorescein. IOP in both eyes was 14.6 mm Hg.

Visual examination

In both eyes distant visual acuity was 6/12. Best corrected visual acuity in both eyes was 6/6. Pinhole improvement in both eyes was 6/6.

Dashavidhapareeksha

She was *VatapittaPrakriti*. *Vikriti* was found to be *Vatapitta*. She was in *Vrudhavasta*. Her *Satwa*, *Sara*, *Samhanana*, *Aharashakti*, *Vyayamashakti*, *Pramana* and *Satmya* were *Madhyama*.

Ashtavidhapareeksha: Her *Nadi*, *Mutra* and *Shabda* were *Sadharana*. *Mala* was *Abadha*. *Jihwa* was *Anupalepa*. *Sparsha* was *Anushnaseetha*. *Akrithi* was *Madhyama* and *Drik* was *Samanaya*.

Clinical diagnosis

The diagnosis of blepharospasm is clinical and is made by careful history taking and physical exam.

Laboratory test

Laboratory tests have no utility in the diagnosis and workup of blepharospasm (9).

Therapeutic Intervention

Netraseka is one of the *Netra kriyakalpa*. The term *Kriyakalpa* comprises of 2 words *kriya* and *kalpa* where *kriya* means procedures used in treating the disease, *kalpa* means formulations.

Netraseka is the process in which medicinal liquids like *taila*, water, buttermilk, meat soup, decoction of the drugs, urine of various animals etc are poured on the closed eye in the form of thin stream from the height of 4 *Angulas* from the eye (10).

It is generally performed during day time. It can also be done during nights in emergency (11).

Table 1: Types of *Netra kalpa* in *Samhitas*

Authors	C a . Ch i . 26	Su . Ut . 18	A . S . Su.32	Sa Ut . kh. 13	B . P M a . kh. 63
Total	3	5	5	7	7
Achyotana	+	+	+	+	+
Bidalaka	+	-	-	+	+
Seka	-	+	+	+	+
Anjana	+	+	+	+	+
Tarpana	-	+	+	+	+
Putapaka	-	+	+	+	+
Pindi	-	-	-	+	+

Table 2: Types of *Netraseka* mentioned in *Samhitas*

Types	Su.S	A.S	Sa.S	B.P
Snehana	+	+	+	+
Ropana	+	+	+	+
Lekhana	+	+	+	+

Aksitarpana was done with *Triphala ghritam* to both the eyes for 100 *Matrakalas* (12) once daily for 7 days. After 7 days gap *Netraseka* with *Triphala kashaya* was done once daily for 2 cycles with the gap of 7 days. First cycle of *Netraseka* was done for 7 days, Second cycle for 14 days.

Purvakarma

- Proportion, quantity and method of preparation of *Triphala Kwatha* – *Yavakoota* (Coarse powder) of *Triphala* was mixed properly and 4 times water added (1part Dravya + 4 part water) and boiled at low

temperature till it became $\frac{3}{4}$ of total amount means $\frac{1}{4}$ reduced. The medicated decoction was filtered with the help of cotton so that there are no minute particulates in the decoction.

- Device/ Instruments for Seka: *Jala neti dhara*
- Preparation: Patient is made to lay in Supine position on *Kriya Kalpa* table. Eyes and whole face were cleaned with sterile cotton swab. *MruduAbhayanga* (mild massage) and *Swedana* (mild sudation) was done to the face to relax the patient and increase the vasodilation of local area.

Pradhana Karma

After *Purva Karma* patients was advised to close the eyes and *Netraseka* with *SukhoshnaTiphala kashayam* was performed on the closed eyes from *KaninikaSandhi* as is indicated in the classical literature for 300 *matrakalas* (13) i.e 10 minutes from the height of four *Angulas* (fingers about 6-6.5 cm).

Paschat Karma

After the treatment, eyes were washed or cleaned with Luke warm water. Patient was advised to take rest and was advices not to see the bright objects and also not to take *Kapha Vridhikara Ahara & Vihara*.

Complications

No complications of the procedure was noticed.

Table 3: Treatment Plan

Treatment given	Drug name	Duration	<i>Ma t r a Kala</i>
<i>Aksitarpana</i>	<i>Triphala ghritha</i>	7 days	100
<i>Netraseka</i> (1st cycle)	<i>Triphala kashayam</i>	7 days	300
<i>Netraseka</i> (2nd cycle)	<i>Triphala kashayam</i>	14 days	300

Figure 1: *Aksitarpana*



Figure 2: *Netraseka*



Table 4: Results

Parameters	Before Treatment	After <i>Aksitarpana</i>	After <i>Netraseka</i>
Involuntary Blinking	30 times/ day	20 times/ day	3 times (Evening) 1 time (While getting up in the Morning)
Duration of Eye Opening	45 Seconds	35 Seconds	5 Seconds
Pain intensity	Severe	Moderate	Mild

Figure 3: Opening of the Eyes before treatment



Figure 4: Opening of the Eyes after treatment



Discussion

Initially patient was treated with *Aksitarpana* with *Triphala ghritha* for 7 days as the disease condition was considered as *Vata* predominance, but the improvement was insignificant and even the pain did not reduce. The disease first started with the clinical findings such as involuntary blinking followed by difficulty in opening of eyelids. These findings showed resemblance with Essential Blepharospasm which is characterised by spasm of orbicularis oculi and upper facial muscles. As patient had main complaints of difficulty in opening eyes, because of the spasm, we

tried *Lekhana Netraseka* (which is indicated for *kaphaja Netra rogas*) with warm *Triphala kashaya*. First, *Netraseka* was done for 7 days and we noticed significant improvement in her symptoms. We have given 7 days gap to check whether the improvement will last or not. But there is no change in improvement. Then again *Netraseka* was performed with warm *Triphala kashaya* for 14 days. There was marked improvement in her symptoms.

According to *Dosha*, in *Alpa Bala* disease *Ashchyotana* is helpful and in *Balawan* disease *Seka* is best (14). According to *Chakradatta Seka*, *Sweda*, *Pralepa*, *Tikthaanna*, *Langhana* are indicated in *Amaavastha* of *Netra rogas* and *Seka* will remove *Netra dosas* by *Pachana karma* (15).

As the disease Blepharospasm is chronic and sometimes becomes more painful that's the reason *Seka Karma* was chosen for the study. *Seka* can improve the eyelids disorders due to its deep penetrating properties. The thickness and integrity of stratum corneum is an important factor determining the transdermal drug absorption. Thicker skin is a greater barrier to passage of the drug. The skin of eyelid is the thinnest in the body and it measures approximately 0.05 cm. The dermis is composed of rich network of elastic fibers, blood vessels, lymphatic's and nerves (16). Penetration of a drug occurs through the stratum corneum, underlying viable epidermis, dermis, and then finally into the circulatory and lymphatic system. *Sukhosna Kwatha* (mild hot fomentation) removes debris, bacteria, bacterial toxins, scales and crusts from the minute folds of the skin and thereby helps to maintain the lid hygiene. *Netraseka* improves the vascular supply by vasodilation and helps in faster and effective absorption.

Mode of Action of Netraseka

Triphala has the qualities of *kaphapittaghna*, *Chaksusya*, *Sara*, *Deepana* (17).

In this *Netraseka* procedure by the *virya*, *karma* and *prabhava* of drugs acts when comes in to contact with the skin of the eyelids. By the qualities of the drugs, *Pachana* and *Samana* of *netradosa* can be attained. This help to break down the *Samprapti* - pathogenesis of the disease.

Conclusion

Netraseka appears to be more effective therapy for Blepharospasm when compared to *Aksitarpana* as frequency of blinking episodes and pain intensity reduced and duration of opening eyes has been observed to be decreased after the *Netraseka* therapy. The patient who couldn't open her eyes without the support of the fingers could do it with a minimal effort after the therapy.

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