

Ayurveda Treatment Protocol in the Management of *Bahala Vartma* w.s.r. to Meibomitis: A Case Study

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Abstract:

Bahala vartma is an inflammatory condition of the eye lids which can be correlated with Meibomitis which is a health challenge due to lacking of a universally accepted treatment protocol. The present study was focused to observe the effectiveness of an Ayurveda treatment protocol in the management of *Bahala vartma* with special reference to Meibomitis. A 68 years old married female patient presented to the *Shalakya* clinic of the National Ayurveda Teaching Hospital, Borella, Sri Lanka with severe pain, redness, lacrimation and swelling of the right upper eyelid for two days. Based on the clinical manifestations the patient was diagnosed as *Bahala vartma*, and was treated with *Sudarshana churna*, *Kaishora guggulu*, *Triphala netra bindu* (eye drop), and selected *Akshi prakshalana* (eye irrigation with herbal decoction) for a period of two weeks. Evaluated the effectiveness based on clinical features before and after treatment and a special scoring system was adopted for the assessing. Pain, redness and lacrimation were significantly reduced within 4 days of commencing the treatment, while slight swelling of the upper eyelid existed. The patient was asymptomatic after two weeks and adverse reactions were not observed. The drugs possessed with the qualities of *Pitta shamaka* (mitigation of *Pitta*), *Raktha shodaka* (purifying blood), *Shothahara* (anti-inflammatory) and *Chakshushya* (vision promoting) which exerts the effectiveness of the medicaments. Thus the prescribed Ayurveda treatment modality is safe and effective in the management of *Bahala vartma*.

Key words: Ayurveda, *Bahala vartma*, Lacrimation, Meibomitis, *Raktha shodaka*

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Introduction:

Shalakya Tantra is a significant branch in which deals with the *Urdvanga roga* (diseases above the clavicle) among *Ashtanga Ayurveda*. Eye is one of most vulnerable and vital part of the *Urdhwanga* according to Ayurveda. Ayurveda classics have enumerated the eye diseases in a very descriptive manner. *Sushruta Samhita* mentions seventysix (76) eye diseases whereas sub classify twentyone (21) *Vartmatagata roga*.^[1] *Bahala vartma* is one of the eye diseases classified under *Vartmagata roga* characterized with uniformly shaped blisters on the upper or lower eyelid, without discoloration resembling the same colour of the skin.^[2] *Sushruta Samhita* mentions a surgical intervention as *Lekhana karma* (scraping) as the *cikitsa* (treatment) for *Bahala Vartma*.^[3] *Bahala vartma* can be compared with Meibomitis considering the clinical onset. Meibomitis is the inflammation of the Meibomian glands occurring as chronic and acute form^[4]. Meibomian glands are also known as tarsal glands and are present in the stroma of the tarsal plate arranged vertically. There are about 30-40 modified sebaceous glands in the upper lid and about 20-30 in the lower lid where the ducts open to the lid margin containing oily layer of tear film.^[5] Chronic Meibomitis commonly occur due to meibomian gland dysfunction (MGD), seen more commonly in middle aged persons. Chronic Meibomitis is characterized with chronic irritation, burning, itching, grittiness, mild lacrimation with remissions and exacerbations intermittently and white frothy secretions frequently seen in eyelid margins and canthi where symptoms get worse in the morning.^[6] Acute Meibomitis is clinically presented with pain around the glands and pressure on it results in expression of pus.^[7] Though there are many herbal treatments available for *Bahala vartma*, specific treatments with scientific validation is lacking. Thus the present study was focused to observe the efficacy of an Ayurveda treatment protocol

in the management of *Bahala vartma* with special reference to Meibomitis.

Case Report:

A 68 years old female patient presented to the Outdoor Patients Department of *Shalakya Tantra* at National Ayurveda Teaching Hospital, Borella, Sri Lanka with severe pain, redness, matting and lacrimation of the right eye with swelling in the right upper eyelid for 2 days. According to the patient she had noticed lacrimation, pain and swelling of the upper eye lid of the right eye for two days and gradually it has been aggravated. Patient was under Allopathic medication for Diabetic retinopathy for both eyes, for a time duration of two years from National Eye Hospital Colombo, Sri Lanka. She also was taking Allopathic treatment for Diabetes Mellitus and Hypothyroidism for 20 years. History of disturbed sleep was reported and there were no evidence of past history or family history related to the present eye disease condition. Blood investigations (Hb, FBC) of the patient were within normal limits while Fasting Blood Sugar was high. Blood pressure was 130/80 mmHg and the pulse rate was 65/min. On the basis of history and clinical examinations the patient was diagnosed as *Bahala vartma* (Meibomitis).

Grading of the clinical features:

Gratation of signs and symptoms of *Bahala vartma* was done according to comprehensive system of Meibomian Gland Dysfunction Classification.^[8] Grades of assessment are mentioned in Table-1.

Treatment Protocol:

Informed written consent was taken from the patient prior to starting the management and treatment protocol was explained. The patient was subjected to internal and external management considering the clinical features of the disease. Management was prescribed for fourteen days and the patient was advised to adhere to food habits and daily regimens

which are beneficial in eye diseases.
Treatment protocol administered to the patient

is enlisted in Table-2 and Table-3. The patient
was followed up for another 14 days.

Table -1: Grading of the clinical features

Signs and Symptoms	Grades		
	0	1	2
Vascularity of lid margin	No or slight redness in lid margin	Redness in lid margin	Marked redness in lid margin
Plugging of gland orifices	No plugging of gland orifices	Fewer than 3 plugging of gland orifices	Three or more plugging of gland orifices with a distribution of less than half of the full Length of the lid
Lid margin irregularity	No lid margin irregularity	Fewer than 3 lid margin irregularities with shallow notching	Three or more lid margin irregularities or deep notching
Lid margin thickening	No lid margin thickening	Lid margin thickening with or without localized rounding	Lid margin thickening with diffuse rounding
Partial glands	No partial glands	Fewer than 3 partial glands	Three or more partial glands and fewer than 3 partial glands with loss of half or more than the full length
Expressed secretions			
Volume	No any secretion	Mild Secretion	Heavy secretion
Quality	Clear	Cloudy	Thick
Expressibility	Heavy	Moderate	Mild

Table-2: Internal management:

Drug	Dose	Route of administration	Duration
<i>Sudarshana churna</i> ^[9]	2.5gm twice daily in morning and night with Luke warm water after meals	Orally	14 days
<i>Kaishora guggulu</i> ^[10]	2 pills (250mg) twice daily in morning and night with Luke warm water after meals	Orally	14 days

Table-3: External management:

Drug	Dose	Route of administration	Duration
<i>Triphala netra bindu</i> ^[11] <ul style="list-style-type: none"> <i>Terminalia chebula</i> Linn. <i>Terminalia bellerica</i> (Gaertner) Roxb. <i>Phyllanthus emblica</i> Linn. 	Two drops twice daily in morning and evening after eye irrigation	Externally	14 days
<i>Akshi prakshsalana</i> <ul style="list-style-type: none"> <i>Jasminum grandiflorum</i> L.(Leaf) <i>Phyllanthus emblica</i> Linn.(Leaf) <i>Tamarindus indica</i> L.(Leaf) 	Twice daily in morning and evening	Externally	14 days

Table-4: Clinical assessment before and after treatment:

Signs and symptoms		Before Treatment	After Treatment			
		Day 01	Day 04	Day 07	Day 14	
		Grade	Grade	Grade	Grade	Percentage of relief
Vascularity Lid Margin		2	0	0	0	100%
Plugging of Gland Orifices		2	1	0	0	100%
Lid Margin Irregularity		1	0	0	0	100%
Lid Margin Thickening		1	0	0	0	100%
Partial Glands		1	0	0	0	100%
Expressed Secretions	Volume	2	1	0	0	100%
	Quality	1	0	0	0	100%
	Expressibility	2	0	0	0	100%

Clinical images:

Fig.-1: Marked swelling and redness of the right upper eye lid near to the nasal canthus with matting of eye lashes.

Fig. -2: Swollen bulbar and palpebral conjunctiva near to the right nasal canthus with marked redness

Fig.-3: Absence of redness of the conjunctiva with mild swelling of the right upper eye lid near to the nasal canthus

Fig.-4: Complete cure with absence of swelling and redness

Preparation of Medicines

Sudarshana churna ^[9] and *Kaishora guggulu* ^[10] was prepared according to the *Ayurveda* pharmacopeia of Sri Lanka. *Triphala netra bindu* (herbal eye drop) was prepared according to the standards mentioned as in the *Sharangadhara Samhita* ^[11].

Preparation of Akshi prakshalana (eye irrigation with herbal decoction)

The *Akshi prakshalana* of *Jasminum grandiflorum* L., *Phyllanthus emblica* Linn. and *Tamarindus indica* L. was prepared and administered according to the methods of Sri Lankan Traditional Ophthalmology. Cleaned and washed tender leaves of *Jasminum grandiflorum* L., *Phyllanthus emblica* Linn. and *Tamarindus indica* L. were taken in equal quantity of 1g and put into a clay pot. Then 600ml of water was added and simmered to 200ml in continuous mild heat. The decoction was filtered through a filter paper and collected into a separate glass vessel. The decoction was freshly prepared under aseptic conditions daily to avoid contamination.

Procedure of Akshi prakshalana

The final decoction was used in Luke warm state and washed the eye gently and slowly for five minutes, twice daily (morning and evening) ½ hour before instilling of the eye drop.

Observations and results:

The patient was assessed on the 4th, 7th and 14th day and the results were analyzed considering the Grading system adopted for the clinical features in each visit. There was a marked reduction in pain, redness and lacrimation within 4 days while slight swelling was present in the right upper eye lid near the nasal canthus (Fig-3). After two weeks the patient was asymptomatic with good prognosis (Fig-4). There were no reported adverse effects of the drug regimen and well tolerated. After completion of treatment, the patient was

followed up for another 14 days. Patient was completely free with 100% relief from the disease and relapses were not reported during the 14 days of follow up. The clinical assessment before and after treatment is shown the Table-4.

Discussion:

In *Bahala vartma* the whole eye lid is full of uniformly shaped boils where the patients will undergo a many clinical manifestations such as pain, redness and swelling of the eye lids which hamper the daily routine work. Hence, prompt management is necessary to avoid complications with visual impairment. According to *Sushruta Samhita* the boils of recent origin with minor inflammation and occurring of the exterior of the eye lids, should be properly diagnosed and treated by fomentation, ointment and by cleansing measures.^[12] Therefore *Pitta shamaka* (mitigation of *Pitta*), *Rakthashodaka* (purifying blood) *Shothahara* (anti-inflammatory) and *Chakshushya* (vision promoting) drugs were selected for the study.

Effect of treatment on pain, redness and lacrimation of the eyelid

Initially on the first visit patient complained of a severe pain of the right upper eyelid, marked redness and lacrimation with matting of the eye lids (Fig-1 and Fig-2). The so mentioned clinical features subsided by the 4th day of treatment (Fig-3 and Table-4).

Effect of treatment on lid margin thickening and irregularity

The lid margin of the right eye lid was thickened and irregular in the first visit. When the patient was assessed on the 4th day of treatment the thickening and the irregularity was reduced and the normal appearance of the lid margin was retained (Table-4).

Effect of treatment on plugging of gland orifices

It was found that meibomian gland orifices has plugged to some extent of the patient at her first visit. It was gradually decreased and by the 7th day of treatment the condition was completely relieved (Table-4).

Mode of action of Sudarshana churna

Sudarshana churna is a powerful drug that possesses *Rakta shodhaka* and *Tridosha shamaka* qualities. Also it possesses with anti-inflammatory and anti-pyretic effects which is essential in managing acute eye diseases. Due to the *Rakta shodhaka* and *Tridosha shamaka* qualities, *Sudarshana churna* has proven the efficacy in managing *Bahala vartma*.

Mode of action of Kaishor guggulu

Kaishora guggulu consist of *Shuddha Guggulu* which possess the quality of *Rakta shodhaka* mainly. The other main ingredients are *Triphala* and *Guduchi*. *Triphala* possess with the *Chakshushya* quality while *Guduchi* signifies as a *Rasayana* drug which is more effective [13]. *Guggulu* is an important ingredient as it is used for various medicinal purposes due to the qualities as *Anabhishtandhi*, *Snigdha*, *Sroto shuddhikara* and *shothahara* actions. Also *Kaishora guggulu* consists of *Pippali*, *Shunti*, *Vidanga*, *Maricha*, *Danti*, *Trivrut* which possess with the *Thikshna*, *Ushna* properties. These qualities are responsible for the *Sroto vishodhana* action which is a key action needed to cure inflammatory eye disease as *Bahala vartma*. Thus it proves the efficacy in managing *Bahala vartma* due to the qualities of *Rakta shodhaka*, *Srotoshuddikara*, *Rasayana* and *Shothahara*.

Mode of action of Triphala Netra bindu (eye drop)

Triphala netra bindu consist of 03 ingredients in equivalent parts of *Haritaki*, *Bibhitaka* and *Amalaki* which is an effective *Chakshushya*

and *Rasayana* drug combination [14]. *Triphala* has the metabolic stimulant action which can break the *Abhishtandatva* of the *Srotas* by its *Ruksha* and *Ushna* properties. Also *Triphala* is an important drug which pacifies *Tridosha* which is beneficial in managing lid diseases as *Bahala vartma*. Further *Triphala* is known as the drug of choice in treating many inflammatory and non-inflammatory eye diseases as it possesses the *Chakshushya* and *Rasayana* properties. The quality control parameters have been analyzed in some traditional herbal eye drops in Sri Lanka which also contain *Triphala* proving of the effectiveness in managing acute eye diseases. [15-16]

Therefore it can be proposed that the Ayurveda protocol with *Sudarshana churna*, *Kaishora guggulu*, *Triphala netra bindu* and *Akshi prakshalana* with selected boiled leaves is an effective line of treatment in the management of *Bahala vartma* with special reference to Meibomitis.

Conclusion:

It can be concluded that the Ayurveda treatment protocol is safe and effective in the management of *Bahala vartma* with special reference to Meibomitis. Further adverse effects were not reported and the treatment protocol was well tolerated.

Limitation of study:

As this is single case study so the same treatment protocol should be validated by a large sample size randomized clinical trial.

Consent of patients:

The written consent was taken from the patient for the treatment and for the publication of data without disclosing the identity.

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