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REVIEW ARTICLE

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Understanding of Krimigranthi w.s.r. to Blepharitis

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ABSTRACT

Ayurveda deals with Ashtangas (8 branches of ayurveda) and Shalakya tantra is one among them. Acharya Sushruta has explained seventy-six eye diseases with their medical and surgical management in detail. Krimigranthi is one among the nine Sandhigata Roga which can be correlated to blepharitis based on the signs and symptomatology. The signs and symptoms include a swelling in the lid margin, lodging of organism in the junction of the eyelids and eyelashes to produce severe itching in the lids. These organisms can move along the eyelid junction which can penetrate and affect the Shuklamandala. Blepharitis is said to be the most common chronic inflammatory disease of the lid margin which can occur at any age. The disease is usually bilateral and become chronic with recurrence and relapse associated with seborrhea of scalp, trichiasis and ectropion. Krimigranthi is said to be a Kaphaja Vyadhi and the management constitutes Swedana, Bhedana, Pratisarana, Rasakriya Anjana and also Nidanaparivarjana, following Pathya-Apathya. The selection of the appropriate treatment depends on the Yukti of the physician and following the appropriate treatment methodology can be helpful to remove the disease from the root and also it is helpful to reduce the recurrence rate.

Key words: Sandhigataroga, Krimigranthi, Blepharitis.

INTRODUCTION

In Ayurveda, the significance of the eyes, referred to as Netra, is emphasized with the saying "Sarvendriyanam Nayanam Pradhanam,"[1] highlighting their importance among all sense organs. Sushruta classified Netra Rogas into 76 types, [2] while Vagbhata enumerated 94 types. [3] Within these classifications, Sandhigata Netra Roga encompasses nine diseases, with Krimigranthi being one of them. Krimigranthi manifests specifically

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in the Pakshma-Vartma Sandhi, demonstrating the intricate categorization and understanding of eye ailments in Ayurveda. The disease is said to be a Kaphaja Bhedana Sadhya Vyadhi which arises at the junction of the eyelids and eyelashes. The Lakshanas of Krimigranthi are Kandu, Vartma Shopha and formation of various form of Krimi in Pakshma-Vartmagata Sandhi which can move towards the Shukla Mandala. The Krimis will be of various shapes and size which invade the inner structure of eye. The treatment principle includes Swedana, Rasakriyanjana with the drugs having Krimihara, Kanduhara, Shothahara Gunas. Blepharitis is a common inflammation of the lid margin which can be exhibited in acute or subacute or chronic forms. The prevalence of blepharitis in the general Indian population is estimated to be around 40% by the surveyed eye care practitioners. The treatment includes mechanical removal of the nits with forceps followed by rubbing of antibiotic ointment on lid margins, anti-inflammatory drugs and also the patient should be advised to refrain from touching or rubbing lids or eyes.

Krimigranthi according to different Acharyas:[4-7]

According to Acharya Sushruta: There will be cyst like swelling produced by *Krimis* in *Vartmana Pakshmana Sandhi* - in eye lids and eye lashes, which produces *Kandu* - itching, developing *Krimis* in *Netrasandhi*. It may extend to the junctional place of *Vartmamandala* and *Shukla Mandala*. The *Krimis* will be of various shapes and sizes which can invade the inner structures of eye.

According to Acharya Vagbhata: Krimigranthi refers to the painful cystic swelling caused by pathogenic organisms, accompanied by symptoms such as *Puyasrava* - pus discharge, Kandu - itching, Arti - burning sensation, and *Pakshma Potavan* - skin cracks. These symptoms can even manifest in areas beyond the eyelids, such as the *Apanga* and *Kaninika Sandhi*.

According to Acharya Videha: Acharya Videha has described *Krimigranthi* as a *Sannipataja* disease which continuously irritates the eye. The pathology includes a *Granthi* (cystic swelling) is produced due to *Pitta* and *Kapha* in *Vartma Shukla Sandhi*. The heat digests the *Granthi* to produce various *Janthu* (*Krimi*). These *Krimis*, having very minute legs, move into *Vartma* and *Pakshma* and settles there.

According to Acharya Yogaratnakara: Yogaratnakara has followed Sushruta's version but replaced the word *Krimigranthi* with *Janthugranthi*.

Chikitsa of Krimigranthi according to different Acharyas:[8-12]

According to Acharya Sushruta: Krimigranthi is one among the five *Bhedhya Vyadhi*, following treatment protocol should be advocated.

- Swedana: Fomentation to the lid margins. A type of Mridu Swedana is effective and it is termed as Lochanochita Sweda (fomentation suitable to the eye - Dalhana).
- Bhedana: Puncturing of Granthi.
- Pratisarana: Manashila, Ela, Tagara and Saindhava Lavana mixed with Madhu. Triphala, Tutha, Kasisa, Saindhava. According to Dalhana, Pratisarana Dravyas advised in Anjananamika are

useful in *Krimigranthi* also. *Triphaladi Rasakriya* should be used after that.

According to Acharya Vagbhata: *Swedana* has to be done with *Gomaya Churna*. *Pratisarana* should be done with *Triphala*, *Kshoudra*, *Kasisa*, *Saindhava*.

According to Acharya Indu: Swedana should be done to the effected eye lids by a Pottali prepared with Gomaya.

According to Acharya Arunadatta: Bhedana should be done by Vrihi Mukha.

According to Acharya Yogaratnakara: Triphala, Amruta, Kasisa, Saindhava, Rasanjana, Rasakriya, Pratisarana and Bhedana Chikitsa has to be followed.

Blepharitis:^[13] Blepharitis is an eyelid inflammation usually surrounding the lid margin.

It includes both infectious and non-infectious forms which is an extremely common disease in ophthalmic practice. It may present as acute or subacute or chronic condition and among all chronic is of more incidence and prevalence.

Chronic blepharitis, a frequent source of eye discomfort and irritation, can affect both eyes simultaneously. It's typically categorized into anterior and posterior types, although symptoms often blend between the two.

Chronic anterior blepharitis: It impacts the area surrounding the eyelash bases and can be either staphylococcal or seborrheic in nature. Seborrheic blepharitis often coincides with generalized seborrhea, potentially affecting the scalp, nasolabial folds, behind the ears, and the sternum.

Diagnosing blepharitis relies on both observable signs and reported symptoms. Symptoms alone don't reliably indicate the type of blepharitis and typically arise from disruptions in normal ocular surface function and decreased tear stability. Common symptoms include burning, grittiness, and mild sensitivity to light, often with periods of improvement and worsening. Morning symptoms are typical, though in cases of concurrent dry eye, symptoms may intensify throughout the day.

The signs include - Staphylococcal blepharitis presents with firm scales and crusting primarily concentrated around the eyelash bases. Mild papillary conjunctivitis and persistent conjunctival redness are common. In severe, longstanding cases, scarring, lid margin thickening (tylosis), eyelash misalignment (trichiasis), and whitening (poliosis) may occur. Styes, marginal keratitis, sometimes, phlyctenulosis can arise as secondary complications. Tear film instability and dry eye often accompany this condition. Seborrheic blepharitis is characterized by inflamed and oily eyelid margins with lashes sticking together. Soft scales can be found anywhere along the eyelid margin and lashes.

Treatment:

1. Lid hygiene:

- Apply a warm compress for several minutes to soften crusts around the eyelash bases.
- Clean the eyelid margins once or twice daily by gently scrubbing with a cotton bud dipped in a diluted solution of baby shampoo or sodium bicarbonate.
- Commercially available soap or alcohol impregnated pads for lid scrubs can also be used cautiously to avoid mechanical irritation.

2. Antibiotics:

- Topical antibiotics like sodium fusidic acid, bacitracin, or chloramphenicol can be used to treat acute folliculitis but are of limited efficacy in chronic cases. After lid hygiene, apply the ointment to the anterior lid margin using a cotton bud or clean finger.
- Oral azithromycin may be beneficial for controlling ulcerative lid margin disease.
- Weak topical steroids such as fluorometholone 0.1% can be helpful for severe papillary conjunctivitis, marginal keratitis, and phlyctenular lesions, although repeated courses may be necessary.
- 4. Tear substitutes are necessary to address associated tear instability and dry eye symptoms.

Chronic posterior blepharitis: It stems from dysfunction of the meibomian glands and alterations in their secretions. Bacterial lipases can lead to the production of free fatty acids, raising the melting point of meibum and hindering its release from the glands. This contributes to eye irritation and potentially fosters the growth of Staphylococcus aureus. Additionally, the loss of tear film phospholipids, which act as surfactants, leads to increased tear evaporation, elevated osmolarity, and an unstable tear film. Symptoms mirror those of anterior blepharitis, while signs include indications of meibomian gland dysfunction, such as abnormal secretion and gland orifice abnormalities.

Treatment:

- Lid hygiene: Warm compresses and cleaning similar to anterior blepharitis management, with an emphasis on massaging the lid to express accumulated meibum.
- Systemic tetracyclines serve as the primary treatment, as they can inhibit staphylococcal lipase production at concentrations below the minimum inhibitory level. Few examples are Oxytetracycline, doxycycline, minocycline, and erythromycin.

Conditions associated with chronic blepharitis include tear film instability, dry eye, chalazion formation, epithelial basement membrane disease, cutaneous conditions (like acne rosacea, seborrheic dermatitis, acne vulgaris), bacterial keratitis, atopic keratoconjunctivitis, and contact lens intolerance.

Discussion

Among the nine diseases of Sandhigata Netra Roga, Krimigranthi occurs specifically in the Pakshma-Vartma Sandhi. This condition is considered as a Kaphaja Bhedana Sadhya Vyadhi, manifesting at the junction of the eyelids and eyelashes. Its symptoms include itching, swelling of the eyelids, and the formation of various types of parasites in the Pakshma-Vartma region, which can migrate towards the Shukla Mandala. These parasites vary in shape and size and can infiltrate the inner structures of the eye. Treatment typically involves Swedana, Pratisarana, Rasakriya Anjanas with Krimihara, Kanduhara and Shothahara

Dravyas. Blepharitis, on the other hand, is a common inflammation of the lid margin that can manifest in acute, subacute, or chronic forms. General measures include improvement of health and balanced diet.

The absence of a clear correlation between symptoms and observable signs, coupled with the uncertain etiology and mechanisms, renders the management of the disease challenging. However, Ayurveda not only provides a cure for the disease but also offers treatments that can substantially reduce its recurrence.

The disease Krimigranthi is having similarities with blepharitis w.r.to signs, symptoms and treatment. Krimigranthi exhibits Kandu - itching, Puyasrava - pus discharge, affects Vartma-Pakshma Sandhi - infection at junctional area of eye lid and eye lashes, Granthi cystic swelling, presence of Krimi - presence of microorganisms, invades Shuklamandala - Krinshnamandala - affects conjunctiva and sclera causing tear film instability, dry eye and affects cornea causing bacterial keratitis and atopic keratoconjunctivitis. The treatment principle of blepharitis is having same principles like that of Krimigranthi which includes Swedana - hot fomentation or warm compressors which can reduces the itching, pain, swelling, Pratisarana - eye lid scrubbing which helps to moisten and remove the microorganisms, Bhedana - incision can express the accumulated meibum and correct the capping of meibomian gland which is caused by excessive and

abnormal meibomian gland secretion. Application of *Rasakriyanjanas* can be considered as local application of antibiotic ointments.

Table 1: Comparison between *Krimigranthi* and Blepharitis

Clinical features								
Krin	nigranthi	Blepharitis						
	Kandu	Itching						
•	Puya srava	 Pus discharge 						
•	Affects Vartma-pakshma sandhi	Infection at ju area of eye las eye lid.						
•	Granthi	 Cystic swelling 	3					
-	Presence of <i>Krimi</i>	 Micro-organis 	ms					
•	Invades shuklamandala – krishnamandala	 Affects the co sclera, cornea 	•					
Tre	Treatment Aspect							
Krin	nigranthi	Blepharitis						
	Swedana	 Warm compre 	ession					
•	Pratisarana	 Eye lid scrubb 	ing					
•	Bhedana	Incision						
•	Rasakriyanjana	 Topical antibiotics 						

Table 2: Description of Rasa-Panchakas of commonly used drugs in Krimigranthi:[14-18]

Dravya	Rasa	Guna	Veerya	Vipaka	Karma	Doshaghnata	Rogaghnata	Pharmacological action
Amalaki	Amla Pradhana Pancha rasa (except lavana)	Laghu Ruksha	Sheeta	Madhura	Tridoshahara Vayahsthapana Rasayana Chakshushya Vrishya	Tridoshahara	Prameha Raktapitta Netraroga Kushta Arshas Somaroga	Antidiabetic Anti-Peptic Ulcer Hypo-lipidemic Anti-Microbial
Vibhitaki	Kashaya	Laghu Ruksha	Ushna	Madhura	Keshya Chakshushya Bhedana Madakari	Kapha- Pittahara	Jvara Kasa Shvasa Atisara	Bronchodialator Antispasmodic Antiasthmatic

Haritaki	Pancha rasa (except lavana) Kashaya mainly	Laghu Ruksha	Ushna	Madhura	Anulomana Rasayana Prajasthapana Chakshushya Lekhana	Tridoshahara	Ashmari Chardi Trishna Shotha Prameha Kushta Vrana Chardi Vatarakta	Antibacterial Antifungal Antioxidant Hypolipidemic
Tutta	Kashaya Madhura Katu	Laghu Guru Ushna	Ushna	Katu	Lekhana Bhedana Rasayana Krimighna Chakshushya Balya Vamaka Twak-doshahara Rechana Garaghna	Kapha pittahara	Netraroga Krimiroga Twak dosha Vrana Vishadosha	Antimicrobial
Kasisa	Tikta Amla Kashaya	Snigdha Ushna Guru Nirmala	Ushna	Katu Amla	Deepaniya Pachaniya Rechaniya Ama samshoshana Svitraghna Jantughna Netrya	Vata kaphashamak a	Arsha yakrut roga, Chakshushya Krimihara Vatakaphaja roga Shula roga Arshas Agnimandhya Palita roga Ashmari Kandu, Krimi	Antibacterial Antifungal
Saindha va	Madhura	Laghu Naatiushan a	Aushan a		Chakshushya Deepana Vrishya Hridya	Tridoshahara	Shothahara Vibandhahara Vrana Pathya Avidahi	Antioxidant
Amruta	Kashaya Tikta	Guru Snigdha	Ushna	Madhura	Medhya Deepaniya Grahi	Tridoshahara	Jwaraghna Chakshushya Krimihara	Anti-rheumatic Anti- inflammatory Antioxidant

					Medohara Rasayana Raktashodhana Balya		Prameha Shvasa Pandu Kamala Kasa	Antiallergic.
Gomutra	Madhura	Ushna Tikshna Aruksha	Ushna	Katu	Deepaniya Pachaniya Lekhaniya Anulomana	Tridoshahara	Kushta Krimi Kandu Udara	Antioxidant Antimicrobial Immunomodulat ing Wound healing Antihelmenthic
Daruhari dra	Tikta Kashaya	Laghu Ruksha	Ushna	Katu	Deepana Pachana Grahi Yakrututtejaka	Pittakaphaha ra	Netra rogahara Karna rogahara Kushtaghna Pramehahara Varnya	Antiseptic Antipyretic Antineoplastic Laxative Bitter tonic

Discussion on the commonly used drugs in *Krimigranthi*:

The table provided outlines the drugs described by various acharvas for the treatment of the disease Krimigranthi. These medications possess beneficial properties such as Krimihara, Lekhana, Kanduahna, Chakshushya, and Shothahara, along with Tridoshashamaka effects. Thev exhibit pharmacological actions including antimicrobial, antioxidant, and anti-inflammatory properties, making them effective in combating the disease. To authenticate the efficacy of these drugs, we administered the treatment protocol recommended by our acharyas to a patient who visited our OPD, and the details are provided below.

A CASE REPORT

A 40-year-old female patient visited the OPD of SPSAMC, H&RC, complaining of itching on both eyelid margins for the past 15 days, accompanied by sensitivity to bright light, redness, and watering of the eyes for the last 10 days. These symptoms significantly hindered her daily activities. There were no significant findings in her past or family medical history. Upon

ocular examination, her visual acuity was normal, but swelling was observed on the eyelid margins, accompanied by scales and conjunctival congestion. The patient was prescribed a course of *Kriyakalpa* treatment and oral medications. This treatment led to a significant reduction in all symptoms, and a follow-up after one month revealed the absence of any eyerelated symptoms. The *Kriyakalpa* treatment included *Darvi Seka* and *Triphala Rasakriyanjana*, supplemented by oral medications such as *Chitrakadi Vati* and Tab. Septillin.

Scope for further research: Further research is warranted to validate the efficacy of this simple and cost-effective treatment methodology. Conducting research on a larger sample size would enable drawing more conclusive findings regarding its effectiveness.

CONCLUSION

Exploring the relationship between *Krimigranthi* and blepharitis provides valuable insights into both conditions, facilitating a deeper understanding of their similarities and differences. This exploration can inform more effective diagnosis and treatment strategies by identifying commonalities and

distinctions between the two ailments. Managing blepharitis presents significant challenges due to its recurrent nature, necessitating the identification and addressing of specific root causes for optimal outcomes. Ayurvedic treatment offers a holistic approach to managing such conditions, with physicians analyzing both the *Dosha Avastha* (constitution) and *Rogi Avastha* (patient's condition) to tailor treatment plans accordingly. By considering the individual characteristics of each patient and their unique imbalances, Ayurveda aims to achieve comprehensive healing and long-term relief from symptoms, thereby enhancing the overall quality of life.

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