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Role of *Girikarnyadi Gutikaanjana* in the Management of *Krimi Granthi* - A Review

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ABSTRACT

Blepharitis is one of the inflammatory conditions of eyelid caused due to bacterial infection or colonization of the eyelid. It is notorious in nature and also very common, but very annoying to the patients and ophthalmologists too, because of its recurrent nature and lifelong treatment. So it is necessary to find an effective treatment modality. The symptoms of Blepharitis closely resembles to *Krimigranthi* described in Ayurveda, hence its treatment can be adopted. *Girikarnyadi Gutika* a Herbo-mineral formulation mentioned in *Netra Prakashika* consists of *Shweta Girikarnika*, *Shodita Shweta Gunja*, *Shweta Punarnava*, *Haridra*, *Daruharidra*, *Shodita Tuttha* and *Gandhaka* used as *Anjana* (application of medicated collyrium to the eye). These drugs are having the properties such as *Krimighna* (Antihelmintic), *Vranaropana* (Wound healing), *Twakrogahara* (cures diseases of skin) and *Chakshushya* (ocular protective) may be helpful in the management of Blepharitis.

Key words: *Blepharitis, Krimigranthi, Girikarnyadi Gutika, Anjana.*

INTRODUCTION

Blepharitis is a chronic inflammation of the margins of the lids. It can be a troublesome and recurring condition, but it remains largely under diagnosed or misdiagnosed due to lack of epidemiologic data on its prevalence and management.

Untreated Blepharitis can affect visual function and also leads to Sty, Chalazion, Dry eye or tear film problems prone for corneal infections, making patient uncomfortable. But treating the disease in the early stages with the effective treatment may improve patient's outcome.^[1] According to the signs and

symptoms, Blepharitis can be correlated to *Krimigranthi*.

AYURVEDIC VIEW

Krimigranthi is a *Vartmagata* (eye lid) disease, where organisms get lodged in the junction of the eyelid and eyelashes which produces severe itching. Different forms of organisms move along the junction of eyelids and penetrate into *Shukla Mandala* (conjunctiva, sclera) and even into the inner structures of the Eye.^[2]

Krimipilla is one among *Pilla Rogas* (diseases of eyelids) which affects only the upper lid characterized with the presence of maggots or other pathogenic organisms, swelling of the lid border, severe itching and foul smell, falling of the eye lashes.^[3]

Girikarnyadi Gutika a herbo-mineral preparation, consists of *Shweta Girikarnika*, *Swetha Gunja*, *Shweta Punarnava*, *Haridra*, *Daruharidra*, *Tuttha* and *Gandhaka*. It is used as *Gutikanjana*.^[4]

MODERN VIEW

Definition

Inflammation of the eyelid margin involving the eyelashes and glands of the eye lids.^[5]

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Etiology

- Poor lid hygiene
- Bacterial infection or colonisation of the eye lids
- Meibomian gland dysfunction
- Dermatitis and Acne rosacea

Classification

1. Anterior Blepharitis
2. Posterior Blepharitis

Clinical features

Symptoms - Burning sensation, Grittiness, Mild photophobia, Crusting and Redness of the lid margins with remissions and exacerbation.

Signs - Hard scales and crusting around the base of the lashes, Mild papillary conjunctivitis, Dry eye syndrome, Madarosis, Trichiasis.

Management

There is limited evidence to support treatment protocol for Blepharitis.

- Lid hygiene: Cotton bud dipped in a warm dilute solution of sodium bicarbonate to soften and remove the crusts.
- Antibiotics: Topical sodium fusidic, Erythromycin, Azithromycin.

DRUG REVIEW**Shweta Girikarnika**

Botanical name : *Clitoria Ternatea*^[6]

Family : Fabaceae

Rasa : Tikta, Kashaya, Katu

Vipaka : Katu

Guna : Laghu

Veerya : Sheeta

Rogaghna Karma : Shothaghna (reduces swelling), Vrana Pachana, Kushtaghna (good for skin diseases), Chakshushya, Vishaghna (antitoxic).

Chemical constituents : Tanin, Starch, Resin, Taraxerol, Taraxerone

Shweta Gunja

Botanical name : *Abrus precatorius*^[6]

Family : Fabaceae

Rasa : Tikta, kashaya

Vipaka : Katu

Guna : Laghu, Tishna, Ruksha

Veerya : Ushna

Rogaghna Karma : Krimighna, Kushtaghna, Netrarogahara (ocular protective), Kandughna, Vranaropana, Indralupta Rogahara (prevents falling of hair).

Chemical composition : Triterpene glycosides, Abrin, Flavonoids and Alkaloids.

Bijaka

Botanical name : *Pterocarpus Marsupium*^[6]

Family : Fabaceae

Rasa : Kashaya

Vipaka : Katu

Guna : Laghu, Ruksha

Veerya : Sheeta

Rogaghna Karma : Kushtaghna, Svitraghna, Krimighna.

Chemical composition : Polyphenolic compounds, Tannins, Pterostilbene, Marsupol.

Shweta Punarnava

Botanical name : *Trianthema Portulacastrum*^[6]

Family : Aizoaceae

Rasa : Katu, Kashaya

Rogaghna Karma : Shothagni (anti inflammatory), Shoolahara.

Chemical composition : Punarnavine, Water soluble bases and potassium salts, Trianthemine, Ecdysterone.

Haridra

Botanical name : *Curcuma Longa* ^[6]

Family : Zingiberaceae

Rasa : Tikta, Katu

Vipaka : Katu

Guna : Ruksha, Laghu

Veerya : Ushna

Rogaghna Karma : *Tvakdosaghna, Sothagna, Vranaropana, Kaphagna, Visagna, Krimihara*

Chemical composition : Curcumin, Curcumen, Terpene

Daruharidra

Botanical name : *Berberis Aristata* ^[6]

Family : Berberidaceae

Rasa : Tikta, Kashaya

Vipaka : Katu

Guna : Laghu, Ruksha

Veerya : Ushna

Rogaghna Karma : *Sothaghna, Vranashodana, Vranaropana, Kaphagna, Twak doshahara.*

Chemical composition : Alkoloids, Berberine, Berberin sulphate

Shodita Tuttha

Chemical name : Copper sulphate or Blue vitriol $CuSO_4 \cdot 5H_2O$ ^[7]

Rasa : Kashaya, Katu

Vipaka : Katu

Guna : Laghu

Veerya : Ushna

Rogaghna Karma : *Chakshushya, Krimihara, Kushtaghna, Tvakrogahara.*

Shodita Gandhashma

Chemical name : Sulphur ^[7]

Rasa : Madhura

Vipaka : Katu

Veerya : Ushna

Rogaghna Karma : *Kanduhara, Kushtahara, Vishahara, Kriminashaka.*

Method of preparation

Equal quantity of powdered *Shwetha Girikarnika, Shodita Shwetha Gunja, Bijaka, Shwetha Punarnava, Haridra, Daruharidra, Shodita Tutta* and *Gandhaka* is taken and triturated with *Jambira Swarasa* (quantity sufficient). It is rolled in to pills and dried. It is applied as *Anjana* either with honey or breast milk. ^[4]

DISCUSSION

Girikarnyadi Gutika predominately has *Katu, Tikta, Kashaya Rasa*. *Katu Rasa* does *Kandunasha* ^[8] (eliminates itching), *Kriminasha* (eliminates worms), *Tikta Rasa* does *Krimighna* ^[8] (antihelminthic), *Kushtaghna*, by *Kashaya rasa* does *Kandunasha*, ^[8] and also *Ushnaveerya* of these drugs creating unfavourable environment to *Krimis* (micro organisms).

Most of the drugs exhibits the properties like *Krimihara* (anti micoribial), *Kandughna, Twak Doshahara* (good in skin diseases), *Kushtaghna* and some of them are *Chakshushya* (Ocular protective) beneficial to treat Blepharitis.

The chemical components of *Clitoria Ternatea's Taraxerol* ^[9] has antibacterial activity on *Saphylococcus aureus, Enterococcus faecalis* and *Pseudomonas*. Triterpene glycosides ^[10] of *Abrus precatorius* have the effect of reducing surface tension which gives the membranes a soap-like quality promoting a wound healing, anti-scarring property and Methanolic crude extracts ^[11] of *Abrus precatorius* seeds exhibited antibacterial activity towards almost all the bacterial microorganisms.

Pterostilbene ^[12] of *Pterocarpus marsopium* was effective in inhibiting the growth of gram-negative bacteria. Aqueous and methanolic extracts of *Trianthema Portulacastrum* ^[13] has significant anti bacterial and antifungal activity in *bacillus cereus, Escherichia coli* and dermatophytic fungi.

Curcumin^[14] compound of *Curcuma longa* is effective against antibacterial and anti-inflammatory action; it exerts even more potent effects when used in combination with various antimicrobial agents. Berberine^[15] of *Berberine aristata* has properties of Antimicrobial, Antiprotozoal activity.

ShodithaTuttha^[16] is having antifungal and antimicrobial properties. Sulphur^[17] has antifungal and anti microbial activity against *Staphylococcus aureus*, *Pseudomonas auregenosa*.

Most of the drugs in this formulation exhibits the properties such as Antimicrobial, Anti-inflammatory, Antiprotozoal activity, this may prevents the progression and reoccurrence of Blepharitis and also trituration with *Jambira Swarasa* (contains citric acid) has Anthelmintic property by all these pharmacological actions of *Girikanyadi Anjana* a combination of Herbo-mineral drugs may be effective in treating *Krimigranthi*.

CONCLUSION

Chemical forms of metal can impact bioavailability and trituration process makes physico-chemical changes and potentiates the efficacy of material. So a Herbo-mineral combination of *Girikaryadi Gutika* may yield good result from synergistic action of multiple active chemicals with herbal medicines.

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