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Study the Antidermatitic effect of *Bhringaraja* in the Management of Vischarsika (Eczema)

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ABSTRACT

Eczema also known as Atopic dermatitis is a non-contagious inflammatory disease of the skin characterized by itching, redness edema, papulovesicles in acute stage; edema and scaling in subacute stage and severe itching, hyperkeratosis and lichenification in the chronic stage. In the developed world Eczema accounts for a large proportion of skin diseases. Current treatment of it provides only symptomatic relief by reducing inflammation and itching. Moreover the allopathic treatment is costly and there are many adverse effects of those drugs. So it has become imperative to search out drugs from natural sources and the herb *bhringaraja* is one of such kind. The major assessment criteria were itching, erythema, excoriation and oozing. After the complete study which includes treating the patient with orally *bhringaraja* tablets and locally *bhringaraja malahar* for 60 days, it was observed that the patients who presented with varied degree of symptoms obtained relief to a great extent after the treatment with the Trial drug. The statistical analysis also shows values which are highly significant for the trial drug.

KEYWORDS

Eczema, Atopic Dermatitis, *Bhringaraja*, *Eclipta Alba*, Medicinal



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INTRODUCTION

Skin is the largest protective organ of the body between external environment and internal environment. The skin supports its own ecosystems of microorganisms, including yeast and bacteria which cannot be removed by any amount of cleaning. In general these microorganisms keep one another in check and are part of healthy skin. When this balance is disturbed, there may be an overgrowth and infection. Also the interaction of the skin with other physical, chemical agents determines the manifestation of various skin diseases. Skin diseases are the most common infections that occur in people of all ages. Skin disorders constitute one of the major health problems in general medical practice also. In most of the skin infections, treatment takes too long to show their effect. Skin diseases are very apparent externally and cause social stigma. The dermatological manifestation may vary from simple itch or discoloration to complete destruction of skin which implies ranging from trifling or trivial to life-threatening conditions.

Ayurvedic literature has also provided substantial information regarding the diagnosis and management of skin disorders. In Ayurveda, the term *Kustha*¹ includes all types of skin disorders. According to

classics, *Kustha* is a *Mahagada* (major disease) which needs to be treated at the initial stage otherwise it becomes incurable.

Kustha roga is a broadly used term which includes nearly all the obstinate skin diseases. *Vicharchika* is enlisted under *Kshudra Kustha* in all Ayurvedic Classics. All types of *Kustha* are *Tridoshaja*, so *Vicharchika* is also having *Trishoja* origin. Most of the Acharyas had described *Vicharchika* as having *Kapha* Dominancy and it comes under *Raktapradoshaja Vikara* with specific involvement of *Rasa*, *Rakta*, *Mamsa* and *Kleda Dushya*. Its similar clinical presentation in Modern Dermatology can be traced as Eczema, which is defined as a non-contagious inflammation of the skin characterized by Erythema, Scaling, Oedema, Vesiculation and Oozing².

There are many clinical trials and treatments in modern science that can evaluate the efficacy in treating disease symptoms, as well as identifying potential risk, leading to safer, more effective treatment for Eczema or even a cure but no such has been established yet. One of the greatest drawbacks in its treatment is the relapsing nature of this disease. And so in spite of many advances made, the current treatment available provides only symptomatic relief



by reducing inflammation and itching. Moreover there are many adverse effects of this drugs leading to its limited use for a certain period of time.

Therefore the world is looking towards Ayurveda for this problem. In Ayurvedic text there are so many special procedures and hundreds of medicaments mentioned which are successful and safer remedies for chronic dermal problems.

*Bhringaraja*³ is one such herb which is considered to have diverse medicinal values in Ayurveda. It is described as having *katu, tikta, ruksha, ushna, kapha vatahara* properties. It is also mentioned as a herb which is effective in *kasa, kustha, krimi, sophya, pandu* as well as *keshya, dantya, tvacha and rasayana*. Charak indicated it for Raktapitta while *Vagbhata*⁴ advocated its consumption for one month to have the *rasayana* effect.

Keeping all this view in mind, *Bhringaraja* was under taken to evaluate its clinical efficacy in treating Eczema. This research to date opens new opportunities in the development of novel and effective strategies to complement and even add to the current available treatments.

AIM

“To study the Antidermatitic effect of

Bhringaraja in the management of *Vischarsika* (Eczema)”

MATERIALS & METHODS

The study was conducted on the patients who reported with *Vischarchika* (Eczema) in the outpatient and inpatient Department of Kayachikitsa, Govt. Ayurvedic College & Hospital, Guwahati-14 Assam. Study was carried out on the patients diagnosed with the disease in all age group, irrespective of sex, religion, economic status and occupation.

DIAGNOSTIC CRITERIA⁵:

1. History of an itchy skin condition (or paternal report of scratching or rubbing in a child)
 - History of generalized dryness or dry skin.
 - History of skin crease involvement (including cheeks in children under 10 years)
 - History of Onset in the first 2 years of life (not used if the child is under 4 years)
 - Personal history of asthma or hay fever or other allergies (or history of atopy in a first degree relatives, in children younger than 4 years)
2. Physical examination:
 - Pruritus and scratching



- Visible flexural dermatitis (oedema or eczema of the cheeks, forehead and outer limb in children younger than 4 years)
- Course mark by exacerbations and remissions
- Lesions typically of Eczematous Dermatitis
- Lichenification of skin

Inclusion criteria:

- Patients of either sex of all age groups
- The patient having cardinal symptoms of Eczema like Itching, erythema excoriation, oozing.

Exclusion criteria

- Patient suffering from other systemic disease like cancer, AIDS, TB etc.
- Patient having other skin disease like Psoriasis, scabies etc

Investigations:

- Routine examination of blood
- Random Blood Glucose Level

PROCEDURE

For clinical trial, patients with the presence of clinical symptoms of Eczema e.g. Itching, Erythema, Oozing, Excoriation were selected for treatment. The total number of patients taken for study were 60, out of which 14 were drop outs and finally 46 patients completed the study. All patients were assigned to a single Group. They were

treated internally with *Bhringaraja vati* (tablets) and externally with *Bhringaraja malahar* (Ointment) application.

The patients were given

1. Bhringaraja Vati

Dose: 2 vati (1g) thrice daily after meal.

2. Bhringaraja Malahar(ointment)

Dose: quantity sufficient thrice daily after properly cleaning the area.

The duration of treatment was 60 days. And Follow up at 15 days interval.

The Trial Methodology was Open non comparative clinical trial.

ASSESSMENT OF RESULTS

Subjective assessment:

- Clinical improvement of the symptoms like Itching, Redness, Oozing, sleep disturbances etc.

Objective assessment:

- Assessment for diagnostic features/ criteria of Eczema by Gradation Of Various Parameters:

The patients were assessed by giving a score before and after the therapy according to the severity of the symptoms. Statistical analysis was carried out to obtain the percentage relief to assess the efficacy of the therapy.

Itching:

- Severe (3⁺): If itching disturbs the day to day activities including sleep.



- Moderate (2⁺)If itching disturbs only sleep.
- Mild (1⁺): If no disturbance in activities and sleep but only complain of itching.
- Normal (0): No itching.

Erythema:

- Severe (3⁺) More reddish in colour.
- Moderate (2⁺), Pinkish red in colour.
- Mild (1⁺) Discrete red colouring of the skin.
- Normal (0): No erythema.

Oozing:

- Severe (3⁺): If the oozing adheres to the cloth, other surfaces.
- Moderate (2⁺): If the patient feels stickiness at the area.
- Mild (1⁺) Only appearance of wetness.
- Normal (0): No oozing.

Excoriation:

- Severe (3⁺): Erythema with more than 50% broken skin, oozing/bleeding may be present.
- Moderate(2⁺): Erythema with less than 50% broken skin, oozing and bleeding may be present.
- Mild (1⁺): Erythema of skin only, no broken areas present.
- Normal (0): Healthy intact skin, no erythema.

STATISTICAL ANALYSIS:

The data obtained from the above treatment were then organized and summarized using the method of frequency distribution. The data were then analyzed using appropriate statistical tools such as arithmetic mean, percentages, standard deviation and Z-test of significance

RESULTS

The effect of treatment of the trial drug *Bhringaraja* , on **Itching** (Figure 1) revealed that 8.69 % patients got complete relief, 54.34 % marked relief, 19.56% moderate relief, 10.86% mild relief & 6.52% no relief. The B.T. mean score was 2.19 which shredded down to 1.02 with SE of 0.15, giving 'Z' value of 7.6 which is significant at $p < 0.01$.

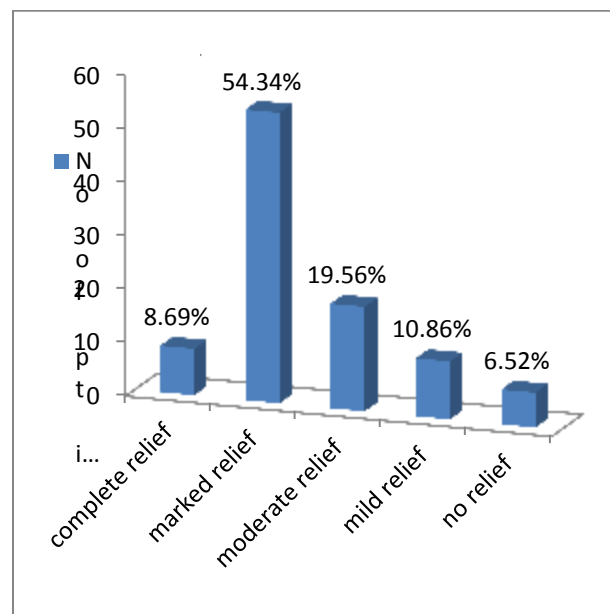


Fig 1 Effect of trial drug on Itching



In case of **Erythema** (Figure 2), the results reveals that 20.93% patients got complete relief, 37.2% marked relief, 27.9% moderate relief, 10.87% mild relief & 2.17 % no relief. the mean value of Erythema before treatment (BT) was 1.8 and it is reduced to 0.43 after treatment (AT), with SE of 0.15 giving 'Z' value 8.76 which is significantly at the P-value less than 0.01.

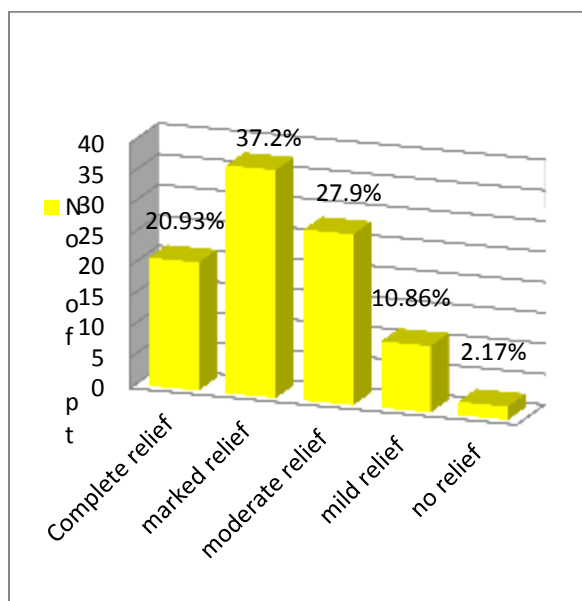


Fig 1 Effect of trial drug on Itching

The effect of the trial drug on Excoriation (Figure 3) revealed that 3.12 % patients got complete relief, 53.12 % marked relief, 40.62% moderate relief, 31.25% mild relief & 15.62% no relief. The mean value of Excoriation before treatment (BT) was 1.5 and it is reduced to 0.78 after treatment (AT), with SE of 0.21 giving 'Z' value 3.3 which is significantly at the P-value less than 0.01.

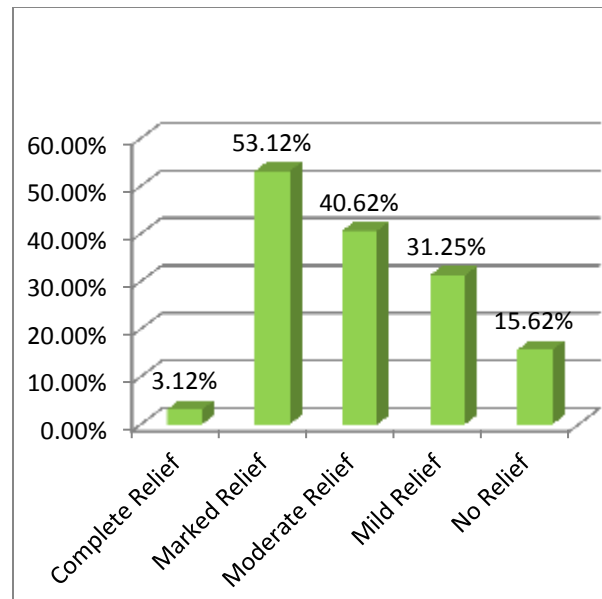


Fig 3 Effect of trial drug on Excoriation

The effect on the symptoms **Oozing** (figure 4) revealed that 73.91 % patients got complete relief, 13.04% marked relief, 4.34% moderate relief, 8.69% mild relief. The mean value of oozing before treatment (BT) was 1.1 which shredded down to 0.26 after treatment (AT), with standard error (SE) of 0.2 giving 'Z' value 4.4 which is significant at the P-value less than 0.01.

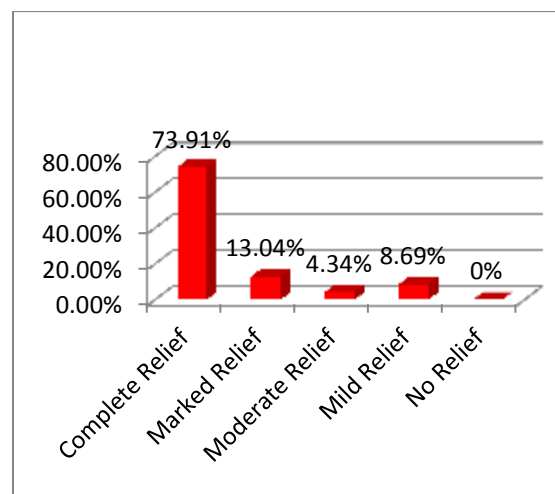


Fig 4 Effect of trial drug on oozing



PICTURES OF PATIENTS



Fig 5 (a)Before Treatment (b)After Treatment



Fig 6 (a)Before Treatment (b)After Treatment



Fig 7 (a)Before Treatment (b)After Treatment



Fig 8(a) Before Treatment



Fig 8 (b) After Treatment

CONCLUSION

After the complete study which includes total 60 days, it was observed that the patients presented with varied degree of *lakshanas* , obtained relief to a great extent after treatment with the trial drug (Refer to Fig 5, Fig 6, Fig 7, Fig 8)..

- The drug proved to be significantly effective for symptoms like Oozing, Erythema, Itching, Excoriation.



- No incidence of relapses was seen in any patient during the treatment.
- No drug related adverse effect was observed in any patient.

It was found that indigenous drug *Bhringaraja* was able to improve the clinical symptoms of the patient to a greater extent. Eczema is hygiene related disease that affects the skin so measures should be taken to maintain hygiene and Sanitation to avoid the incidences of relapses. Further, no adverse side effect was observed in any of the Patients and overall therapeutic response was highly encouraging.

Thus it can be concluded that the trial drug *Bhringaraja* is safe, simple, easily available cost effective therapy to relieve the ailing patients of *Vicharchika*.

Recommendation for future studies: As present study was conducted with limited time and on limited number of patients, further additional studies may be performed on this formulation for a longer duration and with bigger sample size. From the above study it is seen that the indigenous drug does possess anti proliferative effect however further analysis for antibacterial, anti-fungal, anti-inflammatory is a need of the hour.

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CONFLICT OF INTEREST: None



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