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# CLINICAL STUDY ON THE EFFICACY OF AMRITADI GHRITA AND KUTAJA SOORYAPAKA TAILA IN THE MANAGEMENT OF VICHARCHIKA VIS-À-VIS ECZEMA

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**ABSTRACT**

Vicharchika is explained as one among Ekadasha Kshudra Kustha. The clinical features of vicharchika like Kandu, Pidaka, Shyavavarnata, Srava, Rookshata, Daha, Raji, and Vedana are very much similar with the features of Eczema. This is an inflammatory response produced by various internal and external factors. To manage such inflammatory condition of the skin, shamana chikitsa, in the form of bahya and abhyantara sneha prayoga was planned in order to have a safe and effective result in treating Vicharchika vis-à-vis Eczema. The objective of this study was, to evaluate the efficacy of Amritadi Ghrita as Shamana sneha along with the external application of Kutaja Sooryapaka Taila in the management of Vicharchika vis-à-vis Eczema. It is an observational clinical study with pre, mid and post test design where 30 patients of Vicharchika vis-à-vis Eczema were randomly selected and subjected to deepana and pachana with Trikatu choorna administered in a dose of 2 g thrice daily before food with ushnodaka, until nirama lakshanas were observed. Shamana snehapana by Amritadi Ghritha was advised in the dose of 30 ml, in empty stomach at annakala for 30 days along with external application of Kutajasooryapaka Taila twice a day after thoroughly cleaning the affected area of the skin with lukewarm water. Pathya ahara and Vihara were advised throughout the course of the study. In the present study, results obtained with respect to all the parameters were statistically highly significant with `P` value of 0.000. Overall assessment showed marked relief in 20 patients, moderate relief in 6 patients followed by complete relief in 4 patients. Significant results in reduction of all the parameters i.e. Kandu (87.5 %), Pidaka (85.8 %), Srava (60.83 %), Rookshata (60.83 %) and Vaivarnyata (89.16 %) were found. Hence Amritadi Ghrita as Shamana sneha along with the external application of Kutaja Sooryapaka Taila was found to be very effective in the management of Vicharchika vis-à-vis Eczema.

**Keywords:** Vicharchika, Eczema, Trikatu Choorna, Amritadi Ghrita, Kutaja Sooryapaka Taila.

## INTRODUCTION

The skin is the outermost covering of the body which acts as a protective barrier. But very often, it is exposed to many entities which can damage it and may cause many of the skin disorders. About 10 – 20 % of the general practice includes the patients suffering from skin disorders and Eczema accounts for a very large proportion of all the skin diseases.[1] Vicharchika being one among kshudra kustha, is also a rasa, raktha and mamsa dhatu pradoshaja vikara.[2] All the clinical features of vicharchika can be very well correlated to clinical features of Eczema, which is a distinctive pattern of inflammatory response of the skin, induced by a wide range of external and internal factors acting singly or in combination.[3] It includes the effect of various microorganisms, vast external environment, complex endocrine and metabolic transactions within the body and undue stress.[4] The condition can impact considerably on the quality of life of the affected individual by causing physical discomfort, emotional distress, sleep disturbance, restriction of domestic and social activities and by imposing extra financial costs, as it will become a socially disagreeable condition. So to manage this condition, snehana therapy of both bahya and abhyantara sneha was planned. Abhyantara sneha in the form of shamana sneha acts by normalizing the aggravated doshas, both of pitta pradhana and vata kapha pradhana conditions, without expelling them and without disturbing the normal doshas.[5] It increases bala and Varna of dahtus.[6] Bahya sneha reduces the rookshata of twak which in turn may help in reducing the local inflammation and so the snigdhata and varna of twacha may be improved. Hence the present study was intended to assess the efficacy of Amritadi Ghrita as shamana sneha along with the external application of Kutaja Sooryapaka taila in Vicharchika vis-à-vis Eczema.

## MATERIALS AND METHODS

### Objective of the study

To evaluate the efficacy of Amritadi Ghrita as Shamana sneha along with the external application of Kutaja Sooryapaka Taila in the management of Vicharchika vis-à-vis Eczema

### Study design

It is an observational clinical study with pre, mid and post test design. Random Sampling method was employed. Patients diagnosed to have Vicharchika (Eczema) were selected from the OPD, IPD of GAMC Hospital and other referrals from Mysore, India. The total number of cases selected for the study was 30 excluding dropouts. The study was carried out as per ethical guideline with ethical clearance number 2441106.

**Inclusion criteria**
Patients between the age group of 16 to 70 years irrespective of sex, occupation, socio-economic status and duration of illness were selected. Patients who presented with classical signs and symptoms of Vicharchika with special reference to Eczema, fulfilling the diagnostic parameters were selected. Both fresh cases of Eczema and treated cases which have already discontinued other treatments were selected.

**Exclusion criteria**
Patients with other systemic disorders and complications, which interfere with the course of treatment, were excluded. Patients with uncontrolled Diabetes mellitus type 2 and Hypertension were excluded.

**Diagnostic criteria**
Diagnosis was based on the presence of the clinical features of vicharchika as explained in classical texts i.e. Kandu (Pruritis), Pidaka (Papules), Shyava varnata (Pigmentation), Srava (Exudate), Rookshata (Dryness), Raji (Lichenification), Daha (Burning sensation), Ruja (Pain) and RakthaVarnata (Erythema).

**Investigations**
Investigations were conducted in required cases to rule out other systemic diseases or complications.

**Intervention**
**Amapachana**
The patients were administered Trikatu churna in a dose of 2 g thrice daily before food with ushnodaka until nirama lakshanas were observed.

**Shamana sneha**
Shamana snehapana by Amritadi Ghritha 30 ml single dose, in empty stomach at annakala was administered for 30 days.

**Kutajasooryapaka taila**
This was used for external application twice a day after thoroughly cleaning the affected area of the skin with lukewarm water.
Pathya ahara and Vihara were advised throughout the course of the study.

**Criteria for assessment**
The results of the study were assessed through the clinical grading, assigned to the parameters involved in the study i.e. Kandu, Pidaka, Srava, Twak Rookshata and Twak Vaivarnyata.

**Overall assessment**
The following criteria were evolved to assess the total effect of the therapies on the patients of Vicharchika:

- **Complete relief**: Complete improvement in the signs and symptoms of Vicharchika was taken as complete relief.
- **Marked relief**: Improvement of 75 % and above in the signs and symptoms of Vicharchika was considered as marked relief.
- **Moderate relief**: Improvement of 50 % and above in the signs and symptoms of Vicharchika was taken as moderate relief.
- **Mild relief**: Improvement of 25 % and above in the signs and symptoms of Vicharchika was taken as mild relief.
- **No relief**: no change or less than 25 % improvement in the signs and symptoms of Vicharchika was taken as no relief.

**Statistical analysis**
Data was collected before, during and after the treatment. These were analyzed by using descriptive statistics, Chi-Square Test and contingency coefficient analysis using SPSS (Statistical Presentation of System Software) for windows.

## RESULTS
In the present study results obtained with respect to all the parameters were statistically highly significant with `P` value of 0.000. Overall assessment showed marked relief in 20 patients, moderate relief in 6 patients followed by complete relief in 4 patients. Significant results in reduction of all the parameters i.e. Kandu (87.5 %), Pidaka (85.8 %), Srava (60.83 %), Rookshata (60.83 %) and Vaivarnyata (89.16 %) were found.

## DISCUSSION
In the present study, maximum prevalence of eczema is seen in working age group i.e. 41-60 years and 21-40 years and thus the Occupational impact in causing eczema can be inferred. The subsequent prevalence is observed in old age group i.e. 61- 70 years and most of them have the history of contact with chemicals during their past occupation. Thus the cumulative effect of occupational exposure was inferred in such patients. Majority of patients were factory workers and housewives followed by students and office workers.
Most of the patients were habituated to mishra ahara and katu, amla lavana ati sevana in their food habits. The exact role of ahara in causing vicharchika is not clearly established through the present study, except identifying its role as an aggravating factor in few patients.
Family history of Eczema was found in 5 patients and 6 were having family history of Bronchial Asthma and 4 patients are having family history of both types of allergic disorders. This suggests 50 % of patients taken for the study have a familial tendency of developing Atopy. Atopy is an inherited tendency which predisposes an individual to a triad of disorders i.e. Bronchial Asthma, Allergic Rhinitis and Atopic Dermatitis.[7] Atopic individuals have a greater tendency to develop Irritant contact dermatitis.[8] In the present study, 7 patients have the personal history of Allergic Rhinitis and 6 patients have the history of Allergic Rhinitis associated with Bronchial Asthma. Atopic Eczema was found to be associated with Allergic contact dermatitis in 4 patients and irritant contact dermatitis in 5 patients. This also indicates significant occupational and habitual exposure of population to sensitizers and irritants. Such exposures have unmasked the tendency of developing atopy in freshly detected cases, who had unrevealed personal history and/or family history of atopy.

In many of the patients, the role of vihara like mithya samsarga, asatmya vihara, ati atapa sevana were noticed. In many patients habitual usage of hair dyes, rubber slippers, cosmetics, utensil cleansers, soaps etc was noticed. They have either aggravated the condition of eczema or have unmasked the tendency of susceptibility to develop eczema.

In majority of patients winter season was found to exacerbate the condition. The reason may be the low levels of humidity cause drying and fissuring of the horny layer of the skin which favours the action of irritants and sensitizers on the skin.

In few patients, manasika bhavas especially chinta and shoka have found to aggravate the symptom of itching. This in turn may aggravate the inflammation of lesions or modify them. This can be substantiated by the opinion of Wittkower which says, "It is a reasonable estimate that emotional factors are of significant etiological importance in something between one quarter and one half of all the skin disease". He has summarized the direct and indirect influence of the mind on the skin stating that the symptoms or signs like pruritis may be completely psychogenic. The emotional factor is often the most important feature in relation to hypersensitivity.[9]

In the present study results obtained with respect to all the parameters are statistically highly significant with `P` value of 0.000. Overall assessment showed marked relief in 20 patients, moderate relief in 6 patients followed by complete relief in 4 patients. Significant results in reduction of all the parameters i.e. Kandu (87.5 %), Pidaka (85.8 %), Srava (60.83 %), Rookshata (60.83 %) and Vaivarnyata (89.16 %) were found.

Trikatu churna[10] chosen for agnideepana and pachana, restores agni and checks the formation of ama and helps in digesting the ama. Thus it helps to attain niramavastha prior to shamana chikitsa.

Amritadi Ghrita[11] contains amrita *(Tinospora cordifolia)* and shunthi *(Zingiber officinale)* as its components. Amrita possesses tiktha and kashaya rasa, ushna veerya, laghu guna and has the actions of tridosha shamana, rakta prasadana, daha shamana and rasayana. Shunthi possess katu and tikta rasa, ushna veerya, laghu guna and is kaphavatahara and agni deepaka. Ghrita pacifies Vata dosha due to its snigdha guna, Pitta dosha due to its sheeta guna, Kapha dosha due to its property of samskarasya anuvartana i.e. it also performs the actions of samskaraka dravyas like katutiktadi kaphahara dravyas, with which it is processed.[12] It also possess the properties like Varnaprasadana, Mrudukarana and nirvapana i.e. dahaprashamana.[13] Amritadi ghrita as Shamana sneha administered in jatabubhuksha avastha i.e. at the time of hunger circulates throughout the body and pacifies the provokated doshas. Studies on *Tinospora cordifolia* (Amrita) have shown the stimulating effect on macrophages. The activated macrophages secrete GM-CSF (Granulocyte Macrophage- colony stimulating factor), which is a haemopoietic growth factor, which leads to leucocytosis and improved neutrophil function. This Immunomodulatory function plays an important role in Eczema.[14] The significant anti –inflammatory effect of *Tinospora* in acute and sub acute inflammations, is beneficial in acute and sub acute stages of eczema. The histological changes like Parakeratosis are produced during sub acute and chronic stages of eczema, as a result of increased epidermal cell turnover due to inflammation and inflammatory changes in the malphigian layer or the granular cell layer.[15] Acanthosis is produced due to inflammatory changes in malphigian layer causing increase in length of the rete ridges.[16] Thus the anti-inflammatory property with immunomodulatory effect of *Tinospora* is highly efficient in Eczema contributing to the reversal of pathologies of parakeratosis and acanthosis. *Zingiber officinale* (Shunthi) is also known to possess anti-inflammatory effect in both acute and sub acute inflammation. Hence proves beneficial in Eczema.

Kutaja Sooryapaka taila[17] contains leaves of Kutaja *(Wrightia tinctoria)* and Narikela taila (Oil of *Cocos nucifera*). Leaves of *Wrightia tinctoria* are indicated in skin disorders in Siddha system of medicine. Narikela taila has the property of vatapitta shamana. The extracts of Kutaja *(Wrightia tinctoria)* exhibited membrane stabilization effects of lysosomes which are important in limiting the inflammatory responses by preventing the release of lysosomal constituents of activated neutrophils such as bactericidal enzymes and proteases.[18] A study reveals that the ethanolic extract of the leaves of *Wrightia tinctoria* possess immunomodulatory property, which acts probably by stimulating both the specific and nonspecific arms of immunity. An experimental histological evaluation on reversal of parakeratosis to orthokeratosis based on mouse tail test, was conducted which showed nearly 90 percent reversal of parakeratosis to orthokeratosis, when compared with treatments using retinoids and betamethasone.[19] Thus the anti-inflammatory property with immunomodulatory effect of *Wrightia tinctoria* reduces the epidermal cell turnover and inflammatory changes, reversing the histopathological changes of Parakeratosis, Acanthosis and Spongiosis, providing efficient results in Eczema. An article presents the results of clinical and histopathological evaluation and scientific validation of an herbal formula containing *Wrightia tinctoria* and *Cocos nucifera*. Histopathological evaluation was performed for the following parameters: parakeratosis, stratum granulosum, spongiform pustule, Munro's microabscess, acanthosis, and dermal vessel tortuosity. Clinically, significant results were reported with respect to symptoms of scaling and erythema. Histologically, significant reversal of parakeratosis, Munro's micro abscess, and acanthosis were recorded. Significant normalization of dermal vessels and reduction of dermal infiltrate were observed. Significant formation of the granular layer and disappearance of spongiform pustules with the treatment were documented[20] The barrier function of the skin is mainly due to lipids, especially essential fatty acids (EFA), keratin and cell membrane proteins of the cells of Stratum Corneum. The semipermiable character of the cell envelopes seems to depend on their lipid content. Exposure to potential irritants like soap, detergents or lipid solvents result in inflammation leading to maturation impairment and damage of cell membranes, in turn causing EFA deficiency, Trans-epidermal loss of water and chapping of the skin.[21] The principal EFA component of horny layer lipids includes Linoleic acid and arachidonic acid.

**Table 1: Grading given to the parameters of the study**

| | | |
|---|---|---|
| **Kandu** | **K0** | No itching |
| | **K1** | Mild or occasional itching (1- 2 times in a day) |
| | **K2** | Itching On and off |
| | **K3** | Continuous itching without disturbance in routine |
| | **K4** | Continuous itching with disturbance in routine and sleep with blood spot coming out |
| **Pidaka** | **P0** | No eruptions |
| | **P1** | Eruptions in < 25 % of affected area |
| | **P2** | Eruptions in 25- 50 % of affected area |
| | **P3** | Eruptions in 50- 75 % of affected area |
| | **P4** | Eruptions in > 75 % of affected area |
| **Srava** | **SR0** | No discharge |
| | **SR1** | Moisture on the skin lesion |
| | **SR2** | Weeping from the skin lesion, after itching |
| | **SR3** | Weeping from the skin lesion followed by crusting |
| | **SR4** | Profuse weeping making clothes wet |
| **Twak Rookshta** | **R0** | No dryness |
| | **R1** | Loss in skin's normal unctuousness |
| | **R2** | Moderate dryness of the skin |
| | **R3** | Excessive dryness of the skin |
| | **R4** | Dry thickened skin |
| **Vaivarnyata** | **VA0** | Normal color of the skin |
| | **VA1** | Slight discoloration |
| | **VA2** | Moderate discoloration |
| | **VA3** | Marked discoloration |
| | **VA4** | Severe discoloration |

**Table 2: Results on severity of Kandu**

| | **Before** | **During** | **After** |
|---|---|---|---|
| No itching | 0 (0 %) | 1 (3.3 %) | 25 (83.6 %) |
| Mild or occasional itching | 1 (3.3 %) | 9 (30.0 %) | 5 (16.7 %) |
| Itching On and off | 1 (3.3 %) | 15 (50.0 %) | 0 (0 %) |
| Continuous itching without disturbance in routine | 5 (16.7 %) | 5 (16.7 %) | 0 (0 %) |
| Continuous itching with disturbance routine and sleep with blood spot coming out | 23 (76.7 %) | 0 (0 %) | 0 (0 %) |
| Total | 30 | 30 | 30 |
| Cc Value | 0.769 | | |
| P Value | 0.000 | | |

**Table 3: Results on severity of Pidaka**

| | **Before** | **During** | **After** |
|---|---|---|---|
| No eruptions | 1 (3.3 %) | 1 (3.3 %) | 26 (86.7 %) |
| Eruptions in < 25 % of affected area | 0 (0 %) | 5 (16.7 %) | 4 (13.3 %) |
| Eruptions in 25- 50 % of affected area | 1 (3.3 %) | 15 (50.0 %) | 0 (0 %) |
| Eruptions in 50- 75 % of affected area | 7 (23.3 %) | 8 (26.7 %) | 0 (0 %) |
| Eruptions in > 75 % of affected area | 21 (70 %) | 1 (3.3 %) | 0 (0 %) |
| Total | 30 | 30 | 30 |
| Cc Value | 0.758 | | |
| P Value | 0.000 | | |

**Table 4: Results on severity of Srava**

| | **Before** | **During** | **After** |
|---|---|---|---|
| None | 10 (33.3 %) | 10 (33.3 %) | 23 (76.7 %) |
| Moisture on the skin lesion | 0 (0 %) | 2 (6.7 %) | 7 (23.3 %) |
| Weeping from the skin, after itching | 0 (0 %) | 12 (40 %) | 0 (0 %) |
| Weeping from the skin lesion followed by crusting | 0 (0 %) | 5 (16.7 %) | 0 (0 %) |
| Profuse weeping making clothes wet | 20 (66.7 %) | 1 (3.3 %) | 0 (0 %) |
| Total | 30 | 30 | 30 |
| Cc Value | 0.701 | | |
| P Value | 0.000 | | |

**Table 5: Results on severity of Twak Rookshata**

| | **Before** | **During** | **After** |
|---|---|---|---|
| No dryness | 10 (33.3 %) | 11 (36.7 %) | 26 (86.7 %) |
| Loss in skin's normal unctuousness | 0 (0 %) | 2 (6.7 %) | 4 (13.3 %) |
| Moderate dryness of the skin | 0 (0 %) | 11 (36.7 %) | 0 (0 %) |
| Excessive dryness of the skin | 0 (0 %) | 6 (20 %) | 0 (0 %) |
| Dry thickened skin | 20 (66.7 %) | 0 (0 %) | 0 (0 %) |
| Total | 30 | 30 | 30 |
| Cc Value | 0.704 | | |
| P Value | 0.000 | | |

**Table 6: Results on severity of Twak Vaivarnyata**

| | Before | During | After |
|---|---|---|---|
| Normal color of the skin | 0 (0 %) | 0 (0 %) | 24 (80 %) |
| Slight discoloration | 0 (0 %) | 7 (23.3 %) | 5 (16.7 %) |
| Moderate discoloration | 1 (3.3 %) | 17 (56.7 %) | 1 (3.3 %) |
| Marked discoloration | 4 (13.3 %) | 6 (20 %) | 0 (0 %) |
| Severe discoloration | 25 (83.3 %) | 0 (0 %) | 0 (0 %) |
| Total | 30 | 30 | 30 |
| Cc Value | 0.777 | | |
| P Value | 0.000 | | |

**Table 7: Overall assessment after the clinical trial**

| Overall assessment of the clinical trial | Percentage of relief |
|---|---|
| Marked relief | 20 (66.6 %) |
| Moderate relief | 6 (20 %) |
| Complete relief | 4 (13.3 %) |

Coconut oil, originated from vegetable source is rich in EFA, restoring the barrier function of the skin, thus preventing pathologies of inflammation and damage of cell membrane.

## CONCLUSION

Vicharchika is a tridoshaja vyadhi, exhibiting different dominant dosha lakshanas in different stage of the pathology and course of the disease and the influence of secondary factors. It bears a greater resemblance with Eczema. Though it is a Kshudra kusta, the chirakaritva and deerghakalanubandhitva is observed. In most of the patients Genetic predisposition was greatly appreciated as the background cause of manifestation of vicharchika. In the present study viharaja nidana mainly in the form of vyavasayatmaka pravritti was observed. Indulgence in Astamya was mainly observed with respect to cheshtha asatmya. The effect of Aaharaja nidana was identified as not more than the role of vyanjaka hetu, causing aggravation of the condition. Manasika bhavas like chinta, shoka etc were identified to aggravate the condition. The present clinical study conducted on patients of vicharchika with Amritadi ghrita shamana sneha with external application of kutajasooryapaka taila was very effective in the management of Vicharchika vis-à-vis Eczema. Overall assessment showed marked relief in 20 patients, moderate relief in 6 patients followed by complete relief in 4 patients. In the present study, results obtained with respect to all the parameters were statistically highly significant with `P` value of 0.000.

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